# REGISTRARS OF VOTERS EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL VALUATION AS OF
JUNE 30, 2013

**G. S. CURRAN & COMPANY, LTD.**
**Actuarial Services**
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November 8, 2013

Board of Trustees
Registrars of Voters Employees' Retirement System
P.O. Box 57
Jennings, Louisiana 70546

Ladies and Gentlemen:

We are pleased to present our report on the actuarial valuation of the Registrars of Voters Employees' Retirement System for the fiscal year ending June 30, 2013. Our report is based on the actuarial assumptions specified and relies on the data supplied by the system's administrator and accountants. This report was prepared at the request of the Board of Trustees of the Registrars of Voters Employees' Retirement System. The primary purposes of the report are to determine the actuarially required contribution for the retirement system for the fiscal year ending June 30, 2014, to recommend the net direct employer contribution rate for fiscal 2015, and to provide information required for the system's financial statements. This report was prepared exclusively for the Registrars of Voters Employees' Retirement System for a specific limited purpose. It is not for the use or benefit of any third party for any purpose.

Please note that significant changes in the accounting standards affecting retirement systems have been approved by the Governmental Accounting Standards Board. These changes, which are included in GASB Statement 67 will not be effective until the June 30, 2014 valuation. This report was prepared in accordance with the currently effective GASB Statement 25. GASB 67 will require the reporting of an alternative calculation of liabilities based upon a funding method and interest rate that may differ with those used for funding purposes. It is important to note that the liability numbers within this report, including the Frozen Unfunded Actuarial Accrued Liability, are not a reasonable approximation of the liability numbers that will be reported under GASB 67.

This report has been prepared in accordance with generally accepted actuarial principles and practices, and to the best of our knowledge and belief, fairly reflects the actuarial present values and costs stated herein. The undersigned actuaries are members of the American Academy of Actuaries and have met the qualification standards for the American Academy of Actuaries to render the actuarial opinions incorporated in this report, and are available to provide further information or answer any questions with respect to this valuation.

Sincerely,

G. S. CURRAN & COMPANY, LTD.

By: ______________________________
Gary Curran, F.C.A., M.A.A.A., A.S.A.

______________________________
Gregory Curran, F.C.A., M.A.A.A., A.S.A.

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# SUMMARY OF VALUATION RESULTS
## REGISTRARS OF VOTERS EMPLOYEES' RETIREMENT SYSTEM

| | | | |
|---|---|---|---|
| Valuation Date: | | June 30, 2013 | June 30, 2012 |
| Census Summary: | Active Members | 241 | 245 |
| | Retired Members and Survivors | 146 | 143 |
| | Terminated Due a Deferred Benefit | 5 | 6 |
| | Terminated Due a Refund | 35 | 29 |
| Payroll: | | $ 13,086,633 | $ 13,386,956 |
| Benefits in Payment: | | $ 3,398,508 | $ 3,145,379 |
| Market Value of Assets: | | $ 69,206,200 | $ 61,490,163 |
| Actuarial Asset Value: | | $ 71,052,280 | $ 68,481,599 |
| Unfunded Actuarial Accrued Liability | | NONE | NONE |
| Entry Age Normal Accrued Liability | | $ 96,236,913 | $ 92,853,873 |
| Funded Ratio (GASB 50): | | 73.83% | 73.75% |

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| | FISCAL 2014 | FISCAL 2013 |
|---|---|---|
| Employer Normal Cost (July 1): | $ 5,196,962 | $ 4,978,053 |
| Amortization Cost (July 1): | N/A | N/A |
| Interest Adjusted Actuarially Required Contribution (Including Estimated Administrative Costs): | $ 5,698,532 | $ 5,438,263 |
| Projected Ad Valorem Taxes and Revenue Sharing Funds | $ 2,625,981 | $ 2,056,370 |
| Net Direct Employer Actuarially Required Contributions | $ 3,072,551 | $ 3,271,532 |
| Actuarially Required Net Direct Employer Contribution Rate | 22.58% | 23.73% |
| Actual Net Direct Employer Contribution Rate: | 24.25% | 19.75% |
| **Maximum Additional Funding Provided by Ad Valorem Taxes for the Defined Contribution Plan:** | **$ 0** | **$ 0** |

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**Minimum Recommended Net Employer Contribution Rate: Fiscal 2015: 22.50% Fiscal 2014: 24.25%**

Employee Contribution Rate: 7%

Dedicated Funding: Maximum of 0.0625% of ad valorem taxes plus revenue sharing funds

Actuarial Cost Method: Aggregate Actuarial Cost Method

Valuation Interest Rate: 7.5% (Net of Investment Expense)

Exclusions from Census: None

Basis of Actuarial Asset Value: The actuarial value of assets is based on the market value of assets adjusted to phase in asset earnings above or below the assumed rate of return over a five-year period with limits set at 85% and 115% of the market value of assets. When the adjusted value falls outside of the limits, the actuarial value is set equal to the average of the limited and adjusted value.

Method of Recognizing Gains and Losses: Actuarial gains and losses are spread over future normal costs.

## COMMENTS ON DATA

For the valuation, our office electronically downloaded census information from the system's master data processing file indicating each active covered employee's sex, date of birth, service credit, annual salary, and accumulated contributions. Information on retirees detailing dates of birth of retirees and beneficiaries, as well as option categories and benefit amounts, was provided in like manner. In addition, data was supplied on former employees who are vested or who have contributions remaining on deposit. As illustrated in Exhibit X, there are 241 active members in the system of whom 135 have vested retirement benefits including 29 participants in the Deferred Retirement Option Plan (DROP); 146 former system members or their beneficiaries are receiving retirement benefits. An additional 40 members have contributions remaining on deposit with the system; of this number, 5 have vested rights for future retirement benefits. All individuals submitted were included in the valuation.

Census data submitted to our office is tested for errors. Several types of census data errors are possible; to ensure that the valuation results are as accurate as possible, a significant effort is made to identify and correct these errors. In order to minimize coverage errors (i.e., missing or duplicated individual records) the records are checked for duplicates, and a comparison of the current year's records to those submitted in prior years is made. Changes in status, new records, and previous records, which have no corresponding current record, are identified. This portion of the review indicates the annual flow of members from one status to another and is used to check some of the actuarial assumptions, such as retirement rates, rates of withdrawal, and mortality. In addition, the census is checked for reasonableness in several areas, such as age, service, salary, and current benefits. The records identified by this review as questionable are checked against data from prior valuations; those not recently verified are included in a detailed list of items sent to the system's administrator for verification and/or correction. Once the identified data has been researched and verified or corrected, it is returned to us for use in the valuation. Occasionally some requested information is either unavailable or impractical to obtain. In such cases, values may be assigned to missing data. The assigned values are based on information from similar records or based on information implied from other data in the record.

In addition to the statistical information provided on the system's participants, the system's director furnished general information related to other aspects of the system's expenses, benefits and funding. Valuation asset values as well as income and expenses for the fiscal year were based on information furnished by the system's auditor, the firm of Duplantier, Hrapmann, Hogan & Maher, Certified Public Accountants. As indicated in the system's audit report, the net market value of the system's assets was $69,206,200 as of June 30, 2013. Net investment income for fiscal 2013 measured on a market value basis amounted to a gain of $6,274,569. Contributions to the system for the fiscal year totaled $5,971,974; benefits and expenses amounted to $4,530,506.

Notwithstanding our efforts to review both census and financial data for apparent errors, we must rely upon the system's administrative staff and accountants to provide accurate information. Our review of submitted information is limited to validation of reasonableness and consistency. Verification of submitted data to source information is beyond the scope of our efforts.

## COMMENTS ON ACTUARIAL METHODS AND ASSUMPTIONS

This valuation is based on the Aggregate actuarial cost method. Under the Aggregate Cost Method, actuarial gains and losses are spread over future normal costs. Thus, favorable plan experience will lower future normal costs; unfavorable experience will cause future normal costs to increase. In addition, changes in benefits and assumptions as well as contribution surpluses on shortfalls are also spread over future normal costs. In any year in which the net direct employer contribution is scheduled to decrease, the board of trustees may freeze the net direct employer contribution rate and deposit the excess funds, if any, into the Funding Deposit Account.

The current year actuarial assumptions utilized for the report are outlined on pages thirty-seven through forty. All assumptions used are within our "best estimate range" of future long-term experience for the fund.

All calculations, recommendations, and conclusions are based on the assumptions specified. To the extent that prospective experience differs from that assumed, adjustments will be required to contribution levels. Such differences will be revealed in future actuarial valuations.

## CHANGES IN PLAN PROVISIONS

The following changes in plan provisions were enacted during the 2013 Regular Session of the Louisiana Legislature:

**Act 70 –** provides plan provision changes as required by IRS regulations and adopted by the board of trustees as a rule or rules pursuant to the Administrative Procedure Act and disclosed to members of the retirement system.

**Acts 71 –** establishes a range for employee contributions not less than 7% nor more than 9% to be determined by the board in consultation with the actuary for the system.

**Acts 299 –** provides for the collection of ad valorem tax proceeds due to the retirement system and procedures for past due remittals relative to the authority of the treasurer.

**Act 170** allows statewide retirement system boards to make an irrevocable election to have future benefit increases for retirees that are now governed by R.S. 11:242 (Target Ratio Method) to apply a new method under R.S. 11:243. Under R.S. 11:243 systems may grant a Cost of Living Adjustment (COLA) if any of the following apply: a) The system has a funded ratio of 90% or more and has not granted a COLA in the most recent fiscal year; b) The system has a funded ratio of 80% or more and has not granted a COLA in either of the two most recent fiscal years; c) The system has a funded ratio of 70% or more and has not granted a COLA in any of the three most recent fiscal years.

**Act 365** gives members of statewide retirement systems the option to purchase the accrual rate of the receiving system at time of transfer if said accrual rate is greater that the accrual rate of the transferring system. It also allows said members to execute a reverse transfer only one time, at the time of retirement or during active service if submitted to the receiving system on or before December 31, 2013.

## ASSET EXPERIENCE

The actuarial and market rates of return for the past ten years are given below. These rates of return on assets were determined by assuming a uniform distribution of income and expense throughout the fiscal year.

| | Market Value | Actuarial Value |
|---|---|---|
| 2004 | 10.9% | 4.2% |
| 2005 | 6.8% | 7.4% |
| 2006 | 5.2% | 7.4% |
| 2007 | 14.0% | * 13.6% |
| 2008 | -3.9% | 6.6% |
| 2009 | -18.3% | * -6.2% |
| 2010 | 8.7% | 3.8% |
| 2011 | 16.4% | 4.8% |
| 2012 | -5.0% | -0.3% |
| 2013 | 10.1% | 1.6% |

* Includes effect of change in asset valuation method.

The market rate of return gives a measure of investment return on a total return basis and includes realized and unrealized capital gains and losses as well as interest income and dividends. This rate of return gives an indication of performance for an actively managed portfolio where securities are bought and sold with the objective of producing the highest total rate of return. During 2013, the fund earned $1,376,167 of dividends, interest, and other recurring income. Net income was increased by realized and unrealized capital gains of $5,229,233. This income was offset by investment expenses of $330,831. The geometric mean of the market value rates of return measured over the last ten years was 4.0%. The geometric mean of the market value rates of return measured over the last twenty years was 5.0%.

The actuarial rate of return is presented for comparison to the assumed long-term rate of return used for the valuation. The assumed long-term rate of return is 7.5% as of June 30, 2013. The actuarial rate of return is calculated based on the actuarial value of assets and all interest, dividends, and recognized capital gains as given in Exhibit VI. Investment income used to calculate this yield is based upon a smoothing of investment income above or below the valuation interest rate over a five year period. The difference between rates of return on an actuarial and market value basis results from the smoothing utilized. Yields in excess of the 7.5% assumption will reduce future costs; yields below 7.5% will increase future costs. For fiscal 2013, the system experienced net actuarial investment earnings of $4,059,985 less than the actuarial assumed earnings rate of 7.5%. This shortfall in earnings produced an actuarial loss, which increased the normal cost accrual rate by 3.7509%.

## DEMOGRAPHICS AND LIABILITY EXPERIENCE

A reconciliation of the census for the system is given in Exhibit X. The average active member is 52 years old with 14.39 years of service and an average salary of $54,301. The system's active contributing membership decreased by 3 members during the fiscal year. The plan has experienced an increase in the active plan population of 2 members over the last five years. A review of the active census by age indicates that, over the last ten years, the population in the 31-50 age group has decreased significantly while the proportion of active members in the other age groups have increased. Over the same ten-year period the plan showed a fairly stable distribution of service groups.

The average service retiree is 75 years old with a monthly benefit of $2,234. The number of retirees and beneficiaries receiving benefits from the system increased by 3 during the fiscal year; over the last five years this increased by 9. During this same period, annual benefits in payment increased by $702,828.

Plan liability experience for fiscal 2013 was favorable. Salary increases were significantly below projected levels. Withdrawals and Retiree deaths were above projected levels. These factors would be expected to decrease costs. Retirements and DROP entries were above projected levels; this partially offset other factors which tend to reduce costs. Plan liability experience decreased the normal cost accrual rate by 0.6467%.

## FUNDING ANALYSIS AND RECOMMENDATIONS
### DEFINED BENEFIT PLAN

Actuarial funding of a retirement system is a process whereby funds are accumulated over the working lifetimes of employees in such a manner as to have sufficient assets available at retirement to pay for the lifetime benefits accrued by each member of the system. The required contributions are determined by an actuarial valuation based on rates of mortality, termination, disability, and retirement, as well as investment return and other statistical measures specific to the particular group. Each year a determination is made of the normal cost, and the actuarially required contributions are based on the sum of this value and administrative expenses. Under the funding method used for the plan, changes in plan experience, benefits, or assumptions increase or decrease future normal costs. In addition excess or deficient contributions can decrease or increase future costs.

In order to establish the actuarially required contribution in any given year, it is necessary to define the assumptions and funding method. Thus, the determination of what contribution is actuarially required depends upon the funding method employed. Regardless of the method selected, the ultimate cost of providing benefits is dependent upon the benefits, expenses, and investment earnings. Only to the extent that some methods accumulate assets more rapidly and thus produce greater investment earnings does the funding method affect the ultimate cost.

The derivation of the actuarially required contribution for the current fiscal year is given in Exhibit I. The normal cost for fiscal 2014 as of July 1, 2013, is $5,196,962. The total actuarially required contribution is determined by adjusting this value for interest (since payments are made throughout the fiscal year) and adding estimated administrative expenses. As given on line 12 of Exhibit I the total actuarially required contribution for fiscal 2014 is $5,698,532. Required net direct employer contributions are also affected by the available ad valorem taxes and revenue sharing funds which the system receives each year. When these funds change as a percentage of payroll, net direct employer contributions are adjusted accordingly. Available revenue sharing funds for fiscal 2014 are expected to be $110,204 and we estimate that available ad valorem taxes for fiscal 2014 will be $2,515,777. Thus we estimate the net direct cost to the employer for fiscal 2014 will be $3,072,551 or 22.58% of projected payroll.

Liability and asset experience as well as changes in assumptions and benefits can increase or lower plan costs. In addition to these factors, any COLA granted in the prior fiscal year will increase required contributions. New entrants to the system can also increase or lower costs as a percent of payroll depending upon their demographic distribution and other factors related to prior plan experience. Finally, contributions above or below requirements may reduce or increase future costs.

The effects of various factors on the fund's cost structure are outlined below:

| | |
|---|---|
| Normal Cost Accrual Rate – Fiscal 2013 | 37.4883% |
| Factors Increasing the Normal Cost Accrual Rate: | |
| Asset Experience Loss | 3.7509% |
| Contribution Loss | 0.2716% |
| Factors Decreasing the Normal Cost Accrual Rate: | |
| Liability Experience Gain | 0.6467% |
| New Members | 1.3274% |
| Normal Cost Accrual Rate – Fiscal 2014 | 39.5367% |

In addition to the above factors, required net direct employer contributions are also affected by the projected ad valorem taxes and revenue sharing funds which the system is expected to receive each year. When these funds change as a percentage of payroll, net direct employer contributions are adjusted accordingly. We estimate that these funds will increase by 3.59% of payroll in fiscal 2014. Although the actuarially required net direct employer contribution rate for fiscal 2014 is 22.58%, the actual employer contribution rate for fiscal 2014 is 24.25% of payroll. Since the contribution rate for fiscal 2014 was 24.25%, any surplus in employer contributions collected in the fiscal year will decrease the Fund's normal cost accrual rate. We estimate this surplus will result in a decrease of 0.20% to the normal cost accrual rate in fiscal 2015. R.S. 11:103 requires that the net direct employer contributions be rounded to the nearest 0.25%, hence we are recommending a minimum net direct employer contribution rate of 22.50% for fiscal 2015. Under the provisions of RS 11:105 and RS 11:107, the board of trustees may maintain the net direct employer contribution at the current level of 24.25% or set it at any rate at least equal to 22.50% but not more than 24.25%. Under the provisions of RS 11:106 the board may set the rate up to 3% greater than the minimum net direct recommended rate for fiscal 2015. Hence the board may set the rate at a level not less than 22.50% nor more than 25.50%. If the board sets the net direct employer contribution rate above the minimum rate, any excess funds collected will be deposited in the Funding Deposit Account. Funds in this account can be used to reduce future required contributions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions, changes in economic or demographic assumptions, and changes in plan provisions or applicable law. Analysis of the effect of all these factors is beyond the scope of this report. We have, however, calculated the sensitivity of the plan's costs to two factors. First, we have determined that based on current assets and demographics, for each percentage earnings in a single year under (or over) the assumed rate of return on the actuarial value of assets, there will be a corresponding increase (or reduction) in the normal cost accrual rate of 0.66% for the Fund. We have also determined that a 1% reduction in the valuation interest rate for the Fund would increase the actuarially required contribution rate for fiscal 2014 by 11.37% of payroll.

## FUNDING ANALYSIS AND RECOMMENDATIONS
### DEFINED CONTRIBUTION PLAN

Funding for the retirement system's defined contribution account is contingent upon the availability of funds from ad valorem taxes and revenue sharing above the requirements of the defined benefit plan. The maximum amount of ad valorem taxes available to the system is 0.0625% of the ad valorem taxes shown to be collected each year. For fiscal 2014, we project that the system will receive ad valorem taxes in an amount insufficient to meet the requirements of the defined benefit plan. Therefore, there is no funding available for the defined contribution account for fiscal 2014.

## COST OF LIVING INCREASES

During fiscal 2013 the actual cost of living (as measured by the US Department of Labor CPI-U) increased by 1.75%. Cost of living provisions for the system are detailed in R.S. 11:2073 and R.S. 11:246. The former statute allows the board to grant annual cost of living increases of 3% of each retiree's original benefit. This applies only to members who have been retired for at least two years. R.S. 11:246 provides cost of living increases of retirees and beneficiaries over the age of 65 equal to 2% of the benefit in payment on October 1, 1977, or the date the benefit was originally received if retirement commenced after that date (R.S. 11:246 only permits payment of such an increase if earnings exceed the system's valuation rate). R.S. 11:241 provides that cost of living benefits shall be in the form (unless the board otherwise specifies) of $X×(A+B) where X is at most $1 and "A" represents the number of years of credited service accrued at retirement or at death of the member or retiree and "B" is equal to the number of years since retirement or since death of the member or retiree to June 30$^{th}$ of the initial year of such increase. The provisions of this subpart do not repeal provisions relative to cost of living adjustments contained within the individual laws governing systems; however, they are to be controlling in cases of conflict.

Statutory requirements provide that such COLA's may be paid only when the investment earnings of the system are sufficiently above the valuation interest rate to fund the benefit granted. For fiscal 2013 the fund had no excess earnings. In addition, in order to grant any cost of living increase to retirees, the fund is required to exceed a statutory target ratio defined in R.S. 11:242. The funded ratio of the system, as calculated under R.S. 11:242, is 72.83%. This is below the target ratio of 100.00%. Thus, for fiscal 2013, the target ratio was not met by the fund.

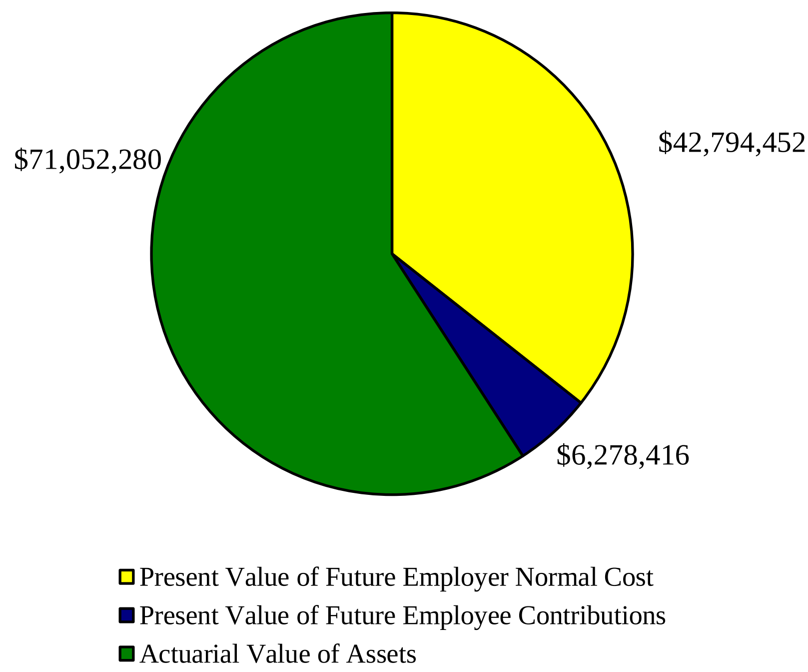
Should the Board of Trustees elect to have the system covered under the provisions of R. S. 11:243, the system would be exempt from the provisions of R. S. 11:242. Instead, the system would only be authorized to grant a COLA under R. S. 11:241, R.S. 11:246, or R. S. 11: 2073 in fiscal years in which the rate of return on an actuarial basis exceeds the valuation interest rate and one of the following applies:

1. The system has a funded ratio of 90% or more and has not granted a benefit increase to retirees, survivors, and beneficiaries in the most recent fiscal year.
2. The system has a funded ratio of 80% or more and has not granted a benefit increase to retirees, survivors, and beneficiaries in the two most recent fiscal years.
3. The system has a funded ratio of 70% or more and has not granted a benefit increase to retirees, survivors, and beneficiaries in the three most recent fiscal years.

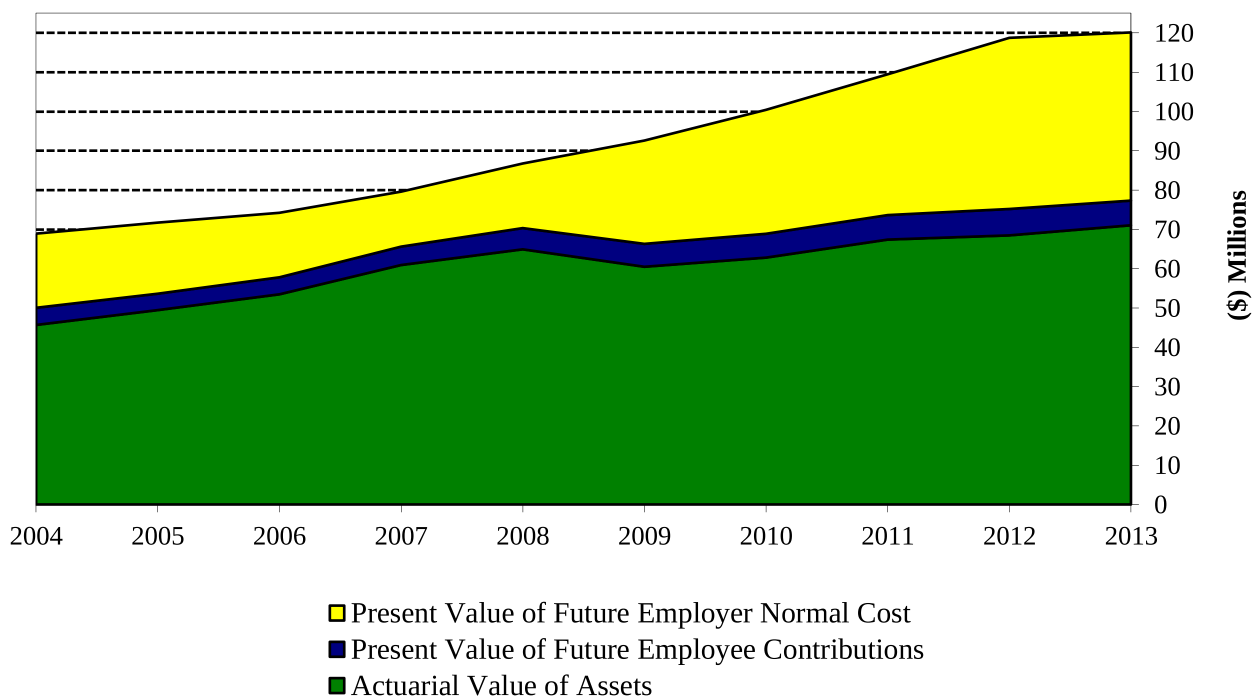
We have determined that for fiscal 2013 the plan has not met the necessary target ratio under R. S. 11:242 and does not have excess investment earnings. Therefore, regardless of the Board's election relative to R. S. 11:243, the Fund is unable to grant COLAs to retirees at this time.

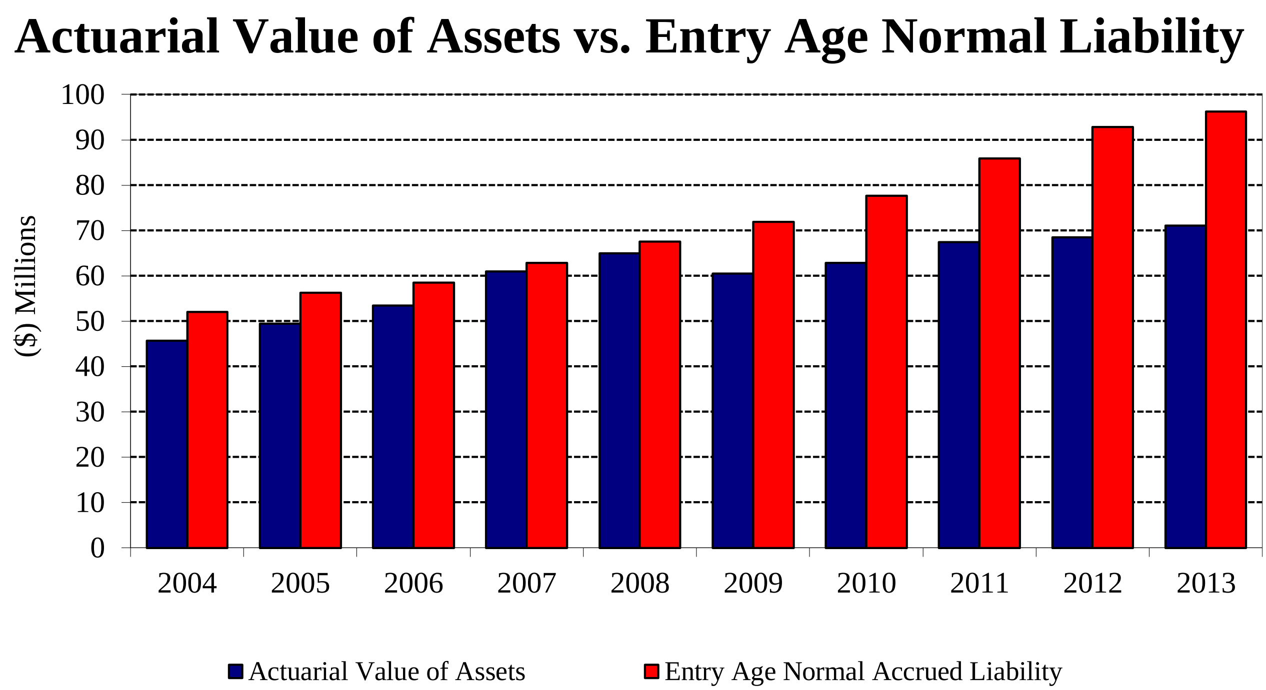
# Components of Present Value of Future Benefits

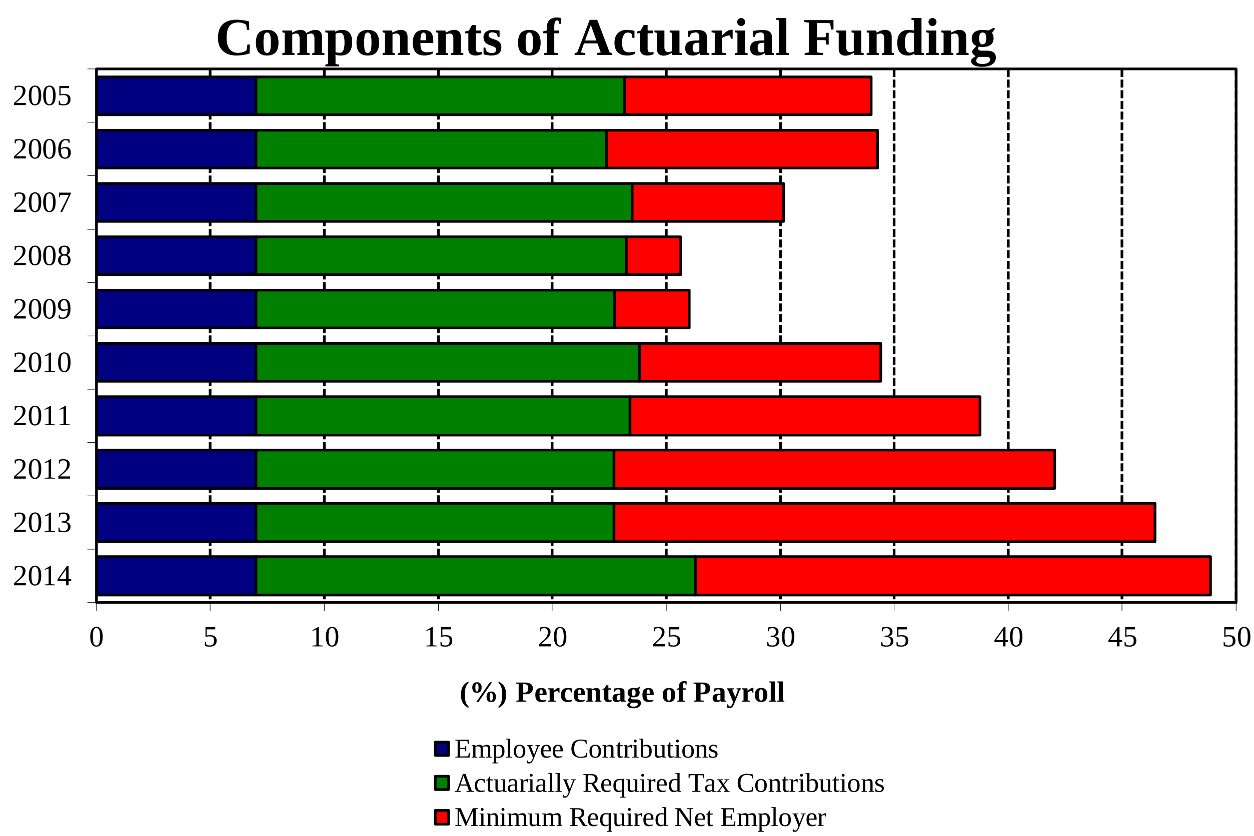
## June 30, 2013




# Components of Present Value of Future Benefits

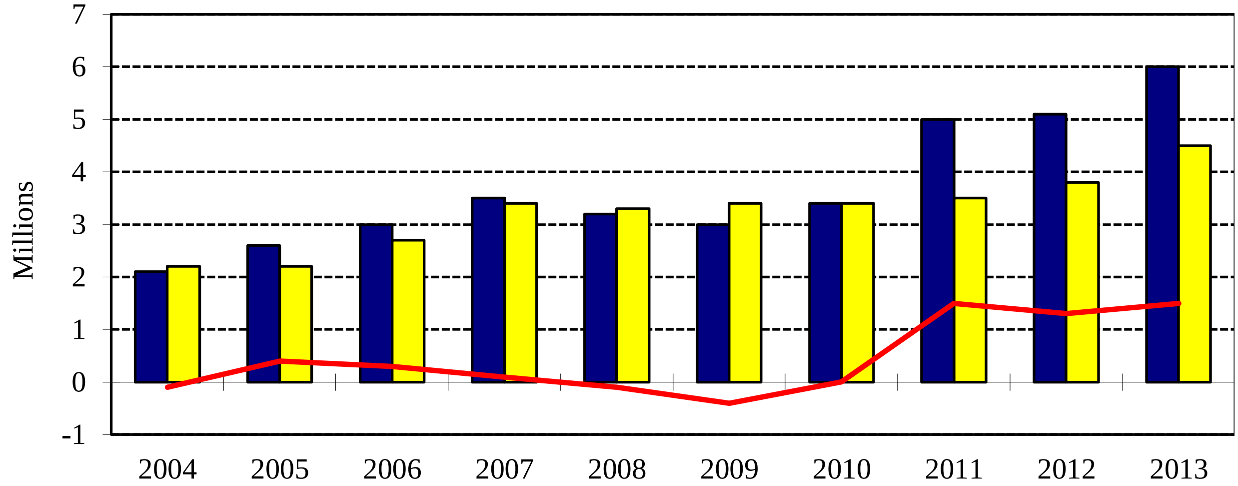





Actuarially Required Tax Contributions consist of the lesser of Actuarially Required Contributions and amount of taxes divided by the projected valuation payroll.

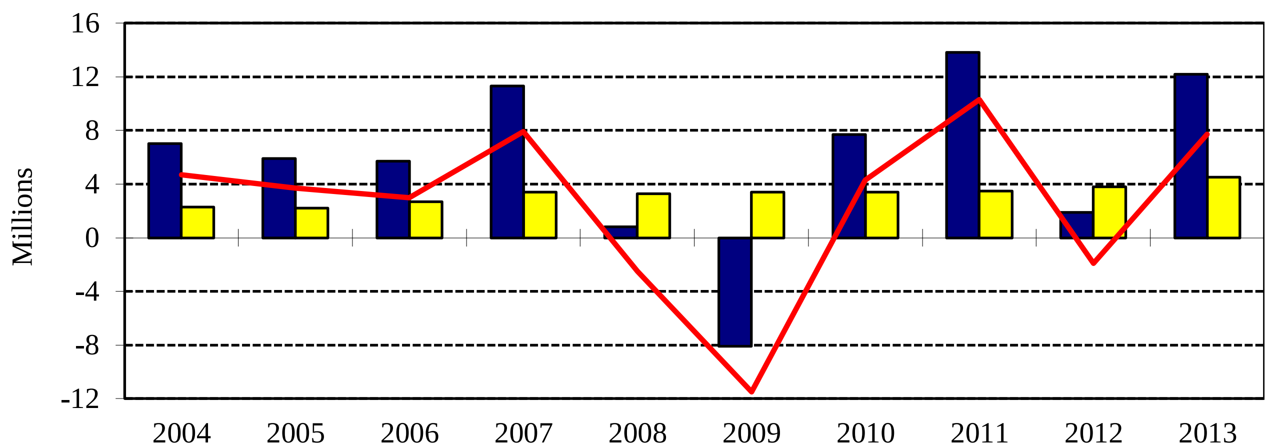
# Net Non-Investment Income




| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|---|---|---|
| Non-Investment Income ($Mil) | 2.1 | 2.6 | 3.0 | 3.5 | 3.2 | 3.0 | 3.4 | 5.0 | 5.1 | 6.0 |
| Benefits and Expenses ($Mil) | 2.2 | 2.2 | 2.7 | 3.4 | 3.3 | 3.4 | 3.4 | 3.5 | 3.8 | 4.5 |
| Net Non-Investment Income ($Mil) | -0.1 | 0.4 | 0.3 | 0.1 | -0.1 | -0.4 | 0.0 | 1.5 | 1.3 | 1.5 |

# Total Income vs. Expenses

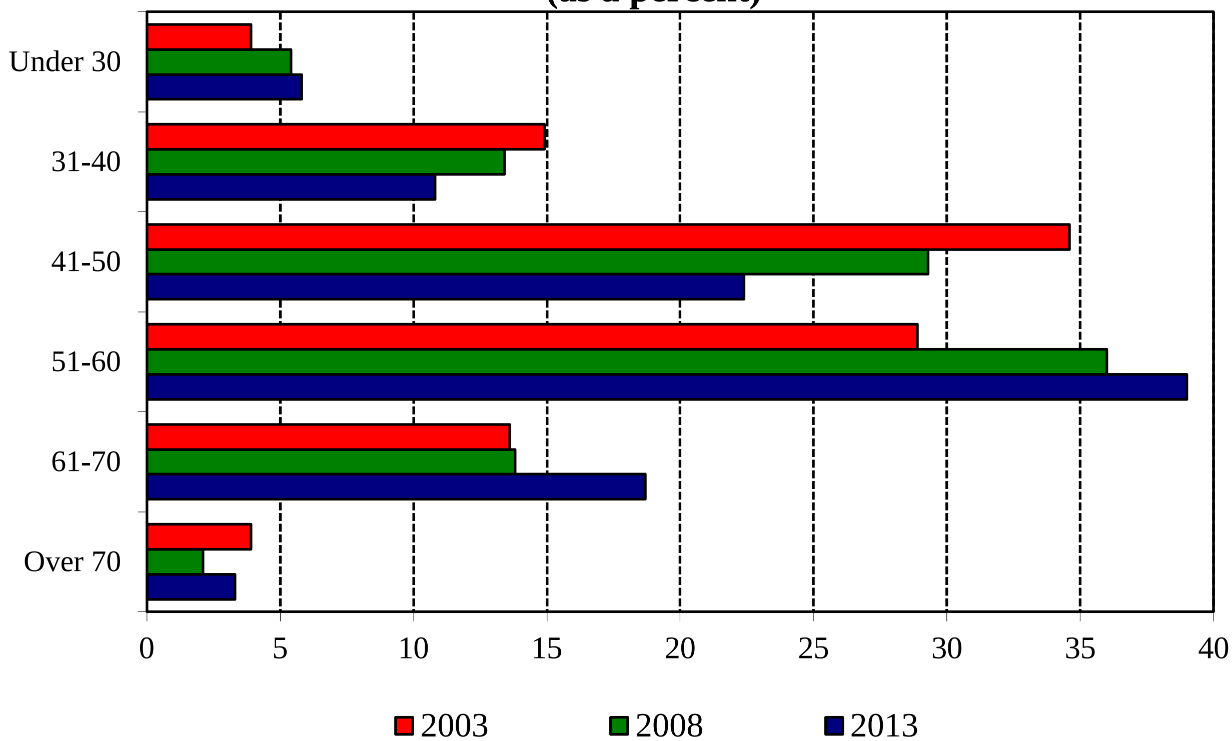
**(Based on Market Value of Assets)**




| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Income ($Mil) | 7.0 | 5.9 | 5.7 | 11.3 | 0.8 | -8.1 | 7.7 | 13.8 | 1.9 | 12.2 |
| Benefits and Expenses ($Mil) | 2.3 | 2.2 | 2.7 | 3.4 | 3.3 | 3.4 | 3.4 | 3.5 | 3.8 | 4.5 |
| Net Change in MVA ($Mil) | 4.7 | 3.7 | 3.0 | 7.9 | -2.5 | -11.5 | 4.3 | 10.3 | -1.9 | 7.7 |

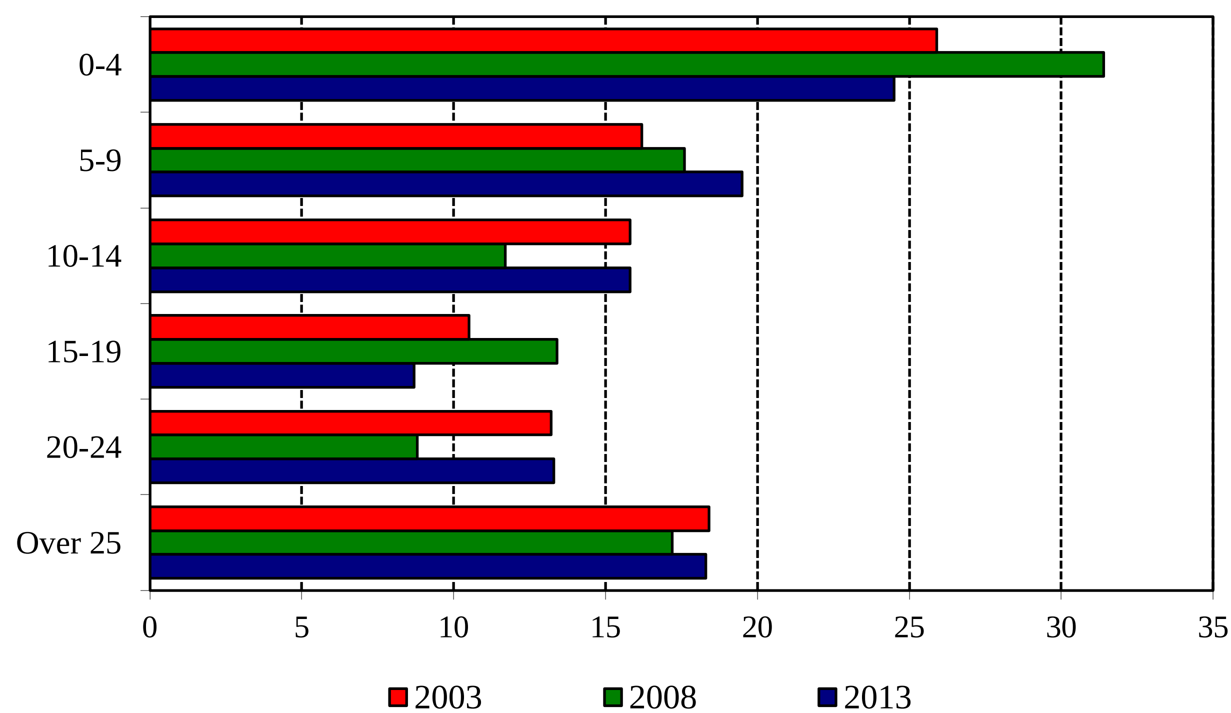
## Active – Census By Age

**(as a percent)**

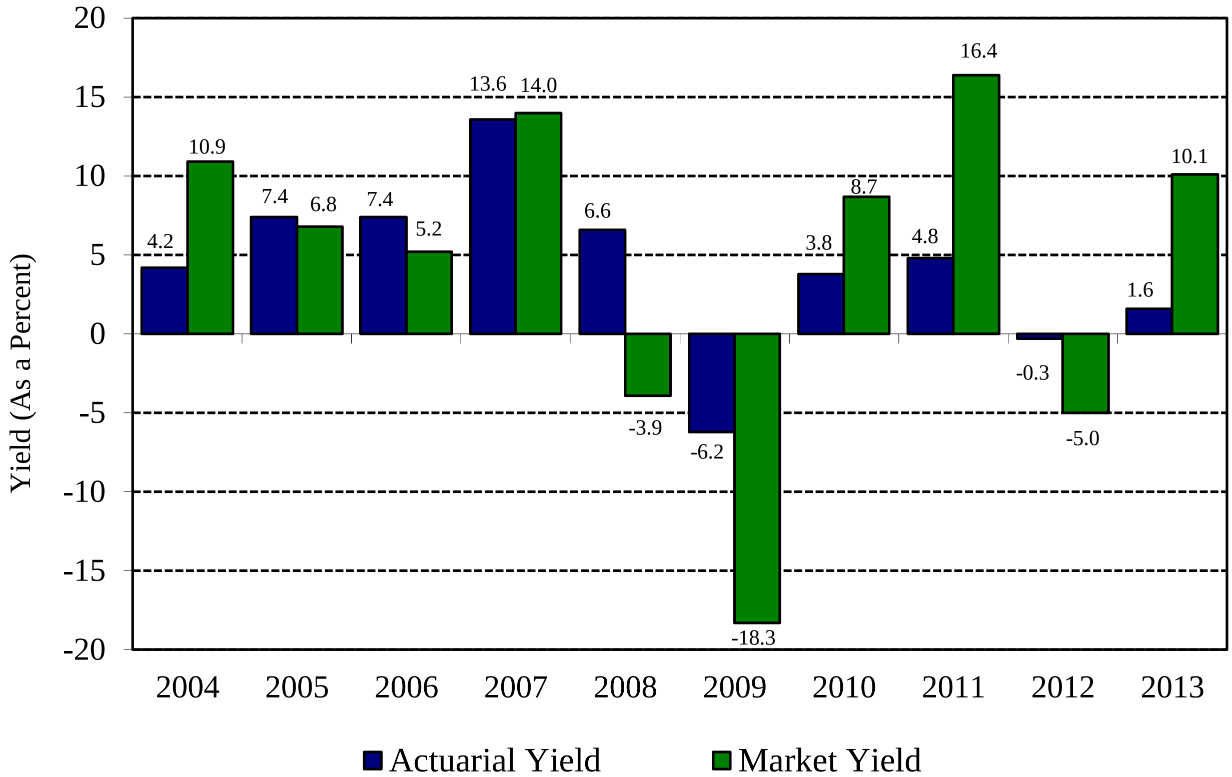



## Active – Census By Service

**(as a percent)**



# Historical Asset Yields



# EXHIBITS

# EXHIBIT I
## ANALYSIS OF ACTUARIALLY REQUIRED CONTRIBUTIONS TO THE DEFINED BENEFIT PLAN

| | | |
|---|---|---|
| 1. | Present Value of Future Benefits | $120,125,148 |
| 2. | Actuarial Value of Assets | $ 71,052,280 |
| 3. | Present Value of Future Employee Contributions | $ 6,278,416 |
| 4. | Funding Deposit Account | $ 0 |
| 5. | Present Value of Future Employer Normal Cost (1-2-3+4) | $ 42,794,452 |
| 6. | Present Value of Future Salaries | $108,239,779 |
| 7. | Employer Normal Cost Accrual Rate (5 ÷ 6) | 39.536714% |
| 8. | Projected Fiscal 2014 Salary for Current Membership | $ 13,144,648 |
| 9. | Employer Normal Cost as of July 1, 2013 (7 x 8) | $ 5,196,962 |
| 10. | Normal Cost Adjusted for Midyear Payment | $ 5,388,325 |
| 11. | Estimated Administrative Cost for Fiscal 2014 | $ 310,207 |
| 12. | GROSS Employer Actuarially Required Contribution for Fiscal 2014 (10 + 11) | $ 5,698,532 |
| 13. | Projected Revenue Sharing Funds for Fiscal 2014 | $ 110,204 |
| 14. | Projected Ad Valorem Tax Contributions for Fiscal 2014 | $ 2,515,777 |
| 15. | Net Direct Employer Actuarially Required Contribution for Fiscal 2014 (12 - 13 - 14) | $ 3,072,551 |
| 16. | Projected Payroll (July 1, 2013 to June 30, 2014) | $ 13,605,388 |
| 17. | Employer's Minimum Net Direct Actuarially Required Contribution as a % of Projected Payroll for Fiscal 2014 (15 ÷16) | 22.58% |
| 18. | Actual Employer Contribution Rate for Fiscal 2014 | 24.25% |
| 19. | Contribution Shortfall (Excess) as a Percentage of Payroll (17-18) | (1.67%) |
| 20. | Increase (Reduction) to Following Year Payment for Contribution Shortfall (Excess) | (0.20%) |
| 21. | Minimum Recommended Net Direct Employer Contribution Rate for Fiscal 2015 (17+20, Rounded to nearest .25%) | 22.50% |

# EXHIBIT II
## PRESENT VALUE OF FUTURE BENEFITS

Present Value of Future Benefits for Active Members:

| | | | |
|---|---|---|---|
| Retirement Benefits | $ 85,045,499 | | |
| Survivor Benefits | 1,365,447 | | |
| Disability Benefits | 519,709 | | |
| Vested Deferred Termination Benefits | 1,394,578 | | |
| Contribution Refunds | 470,266 | | |
| TOTAL Present Value of Future Benefits for Active Members | | $ | 88,795,499 |

Present Value of Future Benefits for Terminated Members:

| | | | |
|---|---|---|---|
| Terminated Vested Members Due Benefits at Retirement | $ 722,850 | | |
| Terminated Members with Reciprocals Due Benefits at Retirement | 38,341 | | |
| Terminated Members Due a Refund | 80,599 | | |
| TOTAL Present Value of Future Benefits for Terminated Members | | $ | 841,790 |

Present Value of Future Benefits for Retirees:

| | | | | |
|---|---|---|---|---|
| Regular Retirees | | | | |
| Maximum | $ 10,045,378 | | | |
| Option 1 | 4,554,809 | | | |
| Option 2 | 4,886,028 | | | |
| Option 3 | 4,514,083 | | | |
| Option 4 | 1,695,992 | | | |
| TOTAL Regular Retirees | | $ 25,696,290 | | |
| Disability Retirees | | 112,087 | | |
| Survivors & Widows | | 4,167,829 | | |
| Annuities Certain Payable to Retirees | | 511,653 | | |
| DROP Account Balances Payable to Retirees | | 0 | | |
| TOTAL Present Value of Future Benefits for Retirees & Survivors | | | $ | 30,487,859 |
| TOTAL Present Value of Future Benefits | | | $ | 120,125,148 |

# EXHIBIT III – Schedule A
## MARKET VALUE OF ASSETS

| | | |
|---|---|---|
| Current Assets: | | |
| Cash in Banks | $ 5,181,069 | |
| Contributions Receivable from Members | 66,360 | |
| Contributions Receivable from Employers | 225,952 | |
| Accrued Interest and Dividends | 160,344 | |
| Investment Receivable | 502,276 | |
| TOTAL CURRENT ASSETS | | $ 6,136,001 |
| Property, Plant and Equipment (Net of accumulated depreciation) | | $ 0 |
| Investments: | | |
| Common Stock | $ 19,791,545 | |
| Mutual Funds | 11,005,743 | |
| Corporate Bonds | 9,393,100 | |
| Cash Equivalents | 7,525,358 | |
| Limited Partnerships | 6,591,607 | |
| U. S. Government Bonds | 3,755,684 | |
| Foreign Equities | 3,014,794 | |
| Real Estate Funds | 1,413,133 | |
| Limited Liability Companies | 968,597 | |
| TOTAL INVESTMENTS | | $ 63,459,561 |
| TOTAL ASSETS | | $ 69,595,562 |
| Current Liabilities: | | |
| Accounts Payable | 13,494 | |
| Purchased Investments Payable | 375,868 | |
| TOTAL CURRENT LIABILITIES | | $ 389,362 |
| MARKET VALUE OF ASSETS | | $ 69,206,200 |

# EXHIBIT III – SCHEDULE B
# ACTUARIAL VALUE OF ASSETS

Excess (Shortfall) of invested income
for current and previous 4 years:

| | | |
|---|---|---|
| Fiscal year 2013 | $ | 1,609,730 |
| Fiscal year 2012 | | (8,351,346) |
| Fiscal year 2011 | | 4,512,736 |
| Fiscal year 2010 | | 359,250 |
| Fiscal year 2009 | | (15,808,500) |
| Total for five years | $ | (17,678,130) |

Deferral of excess (shortfall) of invested income:

| | | |
|---|---|---|
| Fiscal year 2013 (80%) | $ | 1,287,784 |
| Fiscal year 2012 (60%) | | (5,010,808) |
| Fiscal year 2011 (40%) | | 1,805,094 |
| Fiscal year 2010 (20%) | | 71,850 |
| Fiscal year 2009 ( 0%) | | 0 |
| Total deferred for year | $ | (1,846,080) |

| | | |
|---|---|---|
| Market value of plan net assets, end of year | $ | 69,206,200 |
| Preliminary actuarial value of plan assets, end of year | $ | 71,052,280 |

Actuarial value of assets corridor

| | | |
|---|---|---|
| 85% of market value, end of year | $ | 58,825,270 |
| 115% of market value, end of year | $ | 79,587,130 |

| | | |
|---|---|---|
| Final actuarial value of plan net assets, end of year | $ | 71,052,280 |

# EXHIBIT IV
## PRESENT VALUE OF FUTURE CONTRIBUTIONS

| | | |
|---|---|---|
| Employee Contributions to the Annuity Savings Fund | $ | 6,278,416 |
| Employer Normal Contributions to the Pension Accumulation Fund | | 42,794,452 |
| Funding Deposit Account Credit Balance | | 0 |
| TOTAL PRESENT VALUE OF FUTURE CONTRIBUTIONS | $ | 49,072,868 |

# EXHIBIT V
## RECONCILIATION OF CONTRIBUTIONS

| | | | | |
|---|---|---|---|---|
| Employer Normal Cost for Prior Year | $ | 4,978,053 | | |
| Interest on the Normal Cost | | 373,354 | | |
| Administrative Expenses for Prior Year | | 265,962 | | |
| Interest on Expenses | | 9,793 | | |
| TOTAL Interest Adjusted Actuarially Required Contribution | | | $ | 5,627,162 |
| Direct Employer Contributions | $ | 2,634,568 | | |
| Interest on Employer Contributions | | 97,010 | | |
| Ad valorem taxes and Revenue Sharing Funds | | 2,509,222 | | |
| Interest on Taxes | | 92,395 | | |
| TOTAL Interest Adjusted Employer Contribution | | | $ | 5,333,195 |
| Contribution Shortfall (Excess) | | | $ | 293,967 |

# EXHIBIT VI
## ANALYSIS OF INCREASE IN ASSETS

| | | |
|---|---|---|
| Actuarial Value of Assets (June 30, 2012) | | $ 68,481,599 |
| Income: | | |
| Regular Member Contributions | $ 785,705 | |
| Regular Employer Contributions | 2,634,568 | |
| Tax Revenue | 2,509,222 | |
| Irregular Contributions | 42,479 | |
| SUBTOTAL of all contributions | | $ 5,971,974 |
| Net Appreciation in Fair Value of Investments | $ 5,229,233 | |
| Interest | 798,848 | |
| Dividends | 439,068 | |
| Alternative Investment Income | 138,251 | |
| Investment Expense | (330,831) | |
| SUBTOTAL of all investment income | | $ 6,274,569 |
| TOTAL Income | | $ 12,246,543 |
| Expenses: | | |
| Retirement Benefits | $ 4,153,736 | |
| Refunds of Contributions | 43,957 | |
| Administrative Expenses | 265,962 | |
| Transfers to Another System | 66,851 | |
| TOTAL Expenses | | $ 4,530,506 |
| Net Market Income for Fiscal 2013 (Income - Expenses) | | $ 7,716,037 |
| Adjustment for Actuarial Smoothing | | $ (5,145,356) |
| Actuarial Value of Assets (June 30, 2013) | | $ 71,052,280 |

## EXHIBIT VII
## FUND BALANCE

Present Assets of the System Creditable to:

| | |
|---|---|
| Annuity Savings Fund | $ 5,988,741 |
| Annuity Reserve Fund | 30,487,859 |
| Pension Accumulation Fund | 27,649,739 |
| DROP Fund Balance | 5,079,861 |
| Funding Deposit Account | 0 |
| NET MARKET VALUE OF ASSETS | $ 69,206,200 |
| Adjustment for Deferral of Capital (Gains) Losses | 1,846,080 |
| NET ACTUARIAL VALUE OF ASSETS | $ 71,052,280 |

## EXHIBIT VIII – Schedule A
### PENSION BENEFIT OBLIGATION

| | |
|---|---|
| Present Value of Credited Projected Benefits Payable to Current Employees | $ 66,227,026 |
| Present Value of Benefits Payable to Terminated Employees | 841,790 |
| Present Value of Benefits Payable to Current Retirees and Beneficiaries | 30,487,859 |
| TOTAL PENSION BENEFIT OBLIGATION | $ 97,556,675 |
| NET ACTUARIAL VALUE OF ASSETS | $ 71,052,280 |
| Ratio of Net Actuarial Value of Assets to Pension Benefit Obligation | 72.83% |

## EXHIBIT VIII – Schedule B
### ENTRY AGE NORMAL ACCRUED LIABILITIES

| | |
|---|---|
| Accrued Liability for Active Employees | $ 64,907,264 |
| Accrued Liability for Terminated Employees | 841,790 |
| Accrued Liability for Current Retirees and Beneficiaries | 30,487,859 |
| TOTAL Entry Age Normal Accrued Liability | $ 96,236,913 |
| NET ACTUARIAL VALUE OF ASSETS | $ 71,052,280 |
| Ratio of Net Actuarial Value of Assets to Entry Age Normal Accrued Liability | 73.83% |

# EXHIBIT IX
## COST OF LIVING ADJUSTMENTS - TARGET RATIO

| | | | |
|---|---|---|---|
| 1. | Actuarial Value of Assets Divided by PBO as of Fiscal 1986 | | 109.22% |
| 2. | Amortization of Unfunded Balance over 30 years: | | (8.30%) |
| | Adjustments in Funded Ratio Due to Changes in Assumption(s): | | |
| | Changes for Fiscal 1988 | 1.27% | |
| | Changes for Fiscal 1990 | (5.51%) | |
| | Changes for Fiscal 1995 | (0.71%) | |
| | Changes for Fiscal 1997 | (5.78%) | |
| | Changes for Fiscal 1998 | (5.21%) | |
| | Changes for Fiscal 2001 | 2.53% | |
| | Changes for Fiscal 2005 | 0.15% | |
| | Changes for Fiscal 2006 | 0.59% | |
| | Changes for Fiscal 2007 | 4.16% | |
| | Changes for Fiscal 2009 | 9.44% | |
| | Changes for Fiscal 2010 | (1.65%) | |
| | Changes for Fiscal 2012 | (4.03%) | |
| 3. | TOTAL Adjustments | | (4.75%) |
| | Amortization of Adjustments in Funded Ratio over 30 years: | | |
| | Changes for Fiscal 1988 | (1.06%) | |
| | Changes for Fiscal 1990 | 4.22% | |
| | Changes for Fiscal 1995 | 0.43% | |
| | Changes for Fiscal 1997 | 3.08% | |
| | Changes for Fiscal 1998 | 2.61% | |
| | Changes for Fiscal 2001 | (1.01%) | |
| | Changes for Fiscal 2005 | (0.04%) | |
| | Changes for Fiscal 2006 | (0.14%) | |
| | Changes for Fiscal 2007 | (0.83%) | |
| | Changes for Fiscal 2009 | (1.26%) | |
| | Changes for Fiscal 2010 | 0.17% | |
| | Changes for Fiscal 2012 | 0.13% | |
| 4. | TOTAL Amortization of Adjustments | | 6.30% |
| 5. | Target Ratio for Current Fiscal Year (Lesser of 100% or 1+2+3+4) | | 100.00% |
| 6. | Actuarial Value of Assets Divided by PBO as of Fiscal 2013 | | 72.83% |

# EXHIBIT X
## CENSUS EXHIBIT

| | Active | Terminated with Funds on Deposit | DROP | Retired | Total |
|---|---|---|---|---|---|
| Number of members as of June 30, 2012 | 220 | 35 | 25 | 143 | 423 |
| Additions to Census | | | | | |
| Initial membership | 18 | 2 | | | 20 |
| Death of another member | | | | 4 | 4 |
| Omitted in error last year | | | | | |
| Adjustment for multiple Records | 1 | | | | 1 |
| Change in Status during Year | | | | | |
| Actives terminating service | (7) | 7 | | | |
| Actives who retired | (5) | | | 5 | |
| Actives entering DROP | (11) | | 11 | | |
| Term. members rehired | | | | | |
| Term. members who retire | | (1) | | 1 | |
| Retirees who are rehired | | | | | |
| Refunded who are rehired | | | | | |
| Omitted in error last year | | | | | |
| DROP participants retiring | | | (2) | 2 | 0 |
| DROP returned to work | 5 | | (5) | | 0 |
| Eliminated from Census | | | | | |
| Refund of contributions | (8) | (3) | | | (11) |
| Deaths | (1) | | | (9) | (10) |
| Included in error last year | | | | | |
| Adjustment for multiple Records | | | | | |
| Number of members as of June 30, 2013 | 212 | 40 | 29 | 146 | 427 |

**ACTIVES CENSUS BY AGE:**

| Age | Number Male | Number Female | Total Number | Average Salary | Total Salary |
|---|---|---|---|---|---|
| 21 - 25 | 3 | 3 | 6 | 30,952 | 185,711 |
| 26 - 30 | 2 | 6 | 8 | 33,634 | 269,073 |
| 31 - 35 | 0 | 10 | 10 | 34,654 | 346,543 |
| 36 - 40 | 2 | 14 | 16 | 39,209 | 627,339 |
| 41 - 45 | 3 | 20 | 23 | 47,882 | 1,101,292 |
| 46 - 50 | 1 | 30 | 31 | 53,105 | 1,646,247 |
| 51 - 55 | 5 | 35 | 40 | 58,423 | 2,336,907 |
| 56 - 60 | 3 | 51 | 54 | 53,126 | 2,868,819 |
| 61 - 65 | 6 | 25 | 31 | 63,136 | 1,957,207 |
| 66 - 70 | 5 | 9 | 14 | 81,100 | 1,135,397 |
| 71 - 75 | 0 | 6 | 6 | 78,281 | 469,683 |
| 76 - 80 | 1 | 1 | 2 | 71,208 | 142,415 |
| TOTAL | 31 | 210 | 241 | 54,301 | 13,086,633 |

THE ACTIVE CENSUS INCLUDES 135 ACTIVES WITH VESTED BENEFITS, INCLUDING 29 DROP PARTICIPANTS AND 16 ACTIVE FORMER DROP PARTICIPANTS.

**TERMINATED MEMBERS DUE A DEFERRED RETIREMENT BENEFIT:**

| Age | Number Male | Number Female | Total Number | Average Benefit | Total Benefit |
|---|---|---|---|---|---|
| 51 - 55 | 1 | 2 | 3 | 18,396 | 55,189 |
| 56 - 60 | 0 | 2 | 2 | 16,124 | 32,247 |
| TOTAL | 1 | 4 | 5 | 17,487 | 87,436 |

**TERMINATED MEMBERS DUE A REFUND OF CONTRIBUTIONS:**

| Contributions Ranging From | | To | Number | Total Contributions |
|---|---|---|---|---|
| 0 | - | 99 | 12 | 570 |
| 100 | - | 499 | 8 | 2,268 |
| 500 | - | 999 | 3 | 2,312 |
| 1000 | - | 1999 | 1 | 1,061 |
| 2000 | - | 4999 | 5 | 15,871 |
| 5000 | - | 9999 | 4 | 31,295 |
| 10000 | - | 19999 | 2 | 27,222 |
| | | TOTAL | 35 | 80,599 |

***REGULAR RETIREES:***

| Age | Number Male | Number Female | Total Number | Average Benefit | Total Benefit |
|---|---|---|---|---|---|
| 51 - 55 | 1 | 1 | 2 | 48,077 | 96,153 |
| 56 - 60 | 1 | 3 | 4 | 45,374 | 181,494 |
| 61 - 65 | 1 | 12 | 13 | 34,605 | 449,866 |
| 66 - 70 | 3 | 15 | 18 | 32,061 | 577,104 |
| 71 - 75 | 2 | 19 | 21 | 26,554 | 557,643 |
| 76 - 80 | 4 | 13 | 17 | 22,647 | 384,994 |
| 81 - 85 | 2 | 13 | 15 | 20,840 | 312,607 |
| 86 - 90 | 2 | 12 | 14 | 20,566 | 287,924 |
| 91 - 99 | 1 | 3 | 4 | 11,853 | 47,411 |
| TOTAL | 17 | 91 | 108 | 26,807 | 2,895,196 |

***DISABILITY RETIREES:***

| Age | Number Male | Number Female | Total Number | Average Benefit | Total Benefit |
|---|---|---|---|---|---|
| 66 - 70 | 0 | 1 | 1 | 14,541 | 14,541 |
| TOTAL | 0 | 1 | 1 | 14,541 | 14,541 |

***SURVIVORS:***

| Age | Number Male | Number Female | Total Number | Average Benefit | Total Benefit |
|---|---|---|---|---|---|
| 56 - 60 | 3 | 2 | 5 | 13,643 | 68,217 |
| 61 - 65 | 3 | 6 | 9 | 17,171 | 154,543 |
| 66 - 70 | 2 | 1 | 3 | 6,894 | 20,683 |
| 71 - 75 | 1 | 4 | 5 | 6,466 | 32,331 |
| 76 - 80 | 2 | 2 | 4 | 12,915 | 51,661 |
| 81 - 85 | 1 | 6 | 7 | 15,073 | 105,510 |
| 86 - 90 | 0 | 4 | 4 | 13,957 | 55,827 |
| TOTAL | 12 | 25 | 37 | 13,210 | 488,772 |

**ACTIVE MEMBERS:**

| Attained Ages | Completed Years of Service 0 | 1 | 2 | 3 | 4 | 5- 9 | 10-14 | 15-19 | 20-24 | 25-29 | 30&Over | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 - 20 | | | | | | | | | | | | 0 |
| 21 - 25 | 2 | 1 | 2 | 1 | | | | | | | | 6 |
| 26 - 30 | 1 | | 3 | | 3 | 1 | | | | | | 8 |
| 31 - 35 | 1 | 1 | | | 2 | 5 | 1 | | | | | 10 |
| 36 - 40 | 4 | | | | 3 | 4 | 4 | 1 | | | | 16 |
| 41 - 45 | 3 | | 1 | 2 | 3 | 5 | 6 | 1 | 2 | | | 23 |
| 46 - 50 | 1 | 1 | 3 | 1 | | 9 | 6 | 2 | 7 | 1 | | 31 |
| 51 - 55 | 1 | 1 | 1 | 1 | 1 | 7 | 3 | 5 | 11 | 3 | 6 | 40 |
| 56 - 60 | 2 | 2 | 1 | 1 | 4 | 10 | 8 | 5 | 7 | 8 | 6 | 54 |
| 61 - 65 | 1 | 1 | 1 | | | 5 | 7 | 5 | 3 | 2 | 6 | 31 |
| 66 - 70 | 2 | | | | | 1 | 2 | 1 | 1 | | 7 | 14 |
| 71 & Over | | | | | | | 1 | 1 | 1 | 1 | 4 | 8 |
| Totals | 18 | 7 | 12 | 6 | 16 | 47 | 38 | 21 | 32 | 15 | 29 | 241 |

**AVERAGE ANNUAL SALARY OF ACTIVE MEMBERS:**

| Attained Ages | Completed Years of Service 0 | 1 | 2 | 3 | 4 | 5- 9 | 10-14 | 15-19 | 20-24 | 25-29 | 30&Over | Average Salary |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 - 20 | | | | | | | | | | | | 0 |
| 21 - 25 | 25,012 | 27,963 | 34,298 | 39,128 | | | | | | | | 30,952 |
| 26 - 30 | 25,012 | | 28,061 | | 40,280 | 39,038 | | | | | | 33,634 |
| 31 - 35 | 29,049 | 25,012 | | | 45,048 | 33,410 | 35,335 | | | | | 34,654 |
| 36 - 40 | 27,595 | | | | 51,891 | 33,833 | 44,715 | 47,098 | | | | 39,209 |
| 41 - 45 | 28,464 | | 39,458 | 32,126 | 33,868 | 54,559 | 50,950 | 62,620 | 84,739 | | | 47,882 |
| 46 - 50 | 25,012 | 27,951 | 36,711 | 38,444 | | 45,621 | 60,408 | 60,362 | 70,761 | 55,625 | | 53,105 |
| 51 - 55 | 56,740 | 69,820 | 28,488 | 34,142 | 40,871 | 50,280 | 34,528 | 61,671 | 64,016 | 67,318 | 72,802 | 58,423 |
| 56 - 60 | 35,231 | 35,619 | 30,496 | 31,289 | 28,011 | 44,158 | 43,159 | 76,016 | 59,853 | 65,066 | 74,477 | 53,126 |
| 61 - 65 | 25,012 | 61,028 | 24,374 | | | 49,765 | 65,919 | 50,145 | 94,246 | 73,227 | 76,104 | 63,136 |
| 66 - 70 | 49,023 | | | | | 124,897 | 55,078 | 153,412 | 108,574 | | 77,188 | 81,100 |
| 71 & Over | | | | | | | 73,457 | 43,222 | 90,554 | 49,733 | 88,783 | 76,512 |
| Average | 31,951 | 40,430 | 32,144 | 34,542 | 38,820 | 46,640 | 52,006 | 65,059 | 70,932 | 64,953 | 77,094 | 54,301 |

TERMINATED MEMBERS DUE A DEFERRED RETIREMENT BENEFIT:

| Attained Ages | Years Until Retirement Eligibility 0 | 1 | 2 | 3 | 4 | 5- 9 | 10-14 | 15-19 | 20-24 | 25-29 | 30&Over | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 - 50 | | | | | | | | | | | | 0 |
| 51 - 55 | | 1 | | | | 2 | | | | | | 3 |
| 56 - 60 | | | | 1 | 1 | | | | | | | 2 |
| 61 & Over | | | | | | | | | | | | 0 |
| Totals | 0 | 1 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 5 |

AVERAGE ANNUAL BENEFITS OF TERMINATED MEMBERS DUE A DEFERRED RETIREMENT BENEFIT:

| Attained Ages | Years Until Retirement Eligibility 0 | 1 | 2 | 3 | 4 | 5- 9 | 10-14 | 15-19 | 20-24 | 25-29 | 30&Over | Average Benefit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 - 50 | | | | | | | | | | | | 0 |
| 51 - 55 | | 29,375 | | | | 12,907 | | | | | | 18,396 |
| 56 - 60 | | | | 12,321 | 19,926 | | | | | | | 16,123 |
| 61 & Over | | | | | | | | | | | | 0 |
| Average | 0 | 29,375 | 0 | 12,321 | 19,926 | 12,907 | 0 | 0 | 0 | 0 | 0 | 17,487 |

**SERVICE RETIREES:**

| Attained Ages | Completed Years Since Retirement 0 | 1 | 2 | 3 | 4 | 5- 9 | 10-14 | 15-19 | 20-24 | 25-29 | 30&Over | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 - 50 | | | | | | | | | | | | 0 |
| 51 - 55 | 1 | | | | 1 | | | | | | | 2 |
| 56 - 60 | 2 | 1 | | | | 1 | | | | | | 4 |
| 61 - 65 | 2 | | 2 | 1 | 1 | 6 | 1 | | | | | 13 |
| 66 - 70 | 3 | 2 | 1 | 2 | 1 | 7 | 2 | | | | | 18 |
| 71 - 75 | | 1 | 2 | 1 | 2 | 6 | 5 | 3 | 1 | | | 21 |
| 76 - 80 | | | 1 | | | 5 | 2 | 6 | 2 | 1 | | 17 |
| 81 - 85 | | | 1 | | | 3 | 3 | 2 | 3 | 3 | | 15 |
| 86 - 90 | | | | | | 2 | | 3 | 4 | 2 | 3 | 14 |
| 91 & Over | | | | | | | 1 | | | 1 | 2 | 4 |
| Totals | 8 | 4 | 7 | 4 | 5 | 30 | 14 | 14 | 10 | 7 | 5 | 108 |

**AVERAGE ANNUAL BENEFITS PAYABLE TO SERVICE RETIREES:**

| Attained Ages | Completed Years Since Retirement 0 | 1 | 2 | 3 | 4 | 5- 9 | 10-14 | 15-19 | 20-24 | 25-29 | 30&Over | Average Benefit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 - 50 | | | | | | | | | | | | 0 |
| 51 - 55 | 46,828 | | | | 49,325 | | | | | | | 48,076 |
| 56 - 60 | 48,230 | 52,418 | | | | 32,616 | | | | | | 45,374 |
| 61 - 65 | 26,068 | | 30,276 | 48,565 | 30,182 | 29,208 | 83,180 | | | | | 34,605 |
| 66 - 70 | 55,892 | 29,130 | 17,424 | 26,781 | 24,109 | 30,632 | 20,826 | | | | | 32,061 |
| 71 - 75 | | 58,223 | 31,368 | 44,310 | 24,466 | 33,348 | 13,494 | 20,900 | 13,184 | | | 26,554 |
| 76 - 80 | | | 54,015 | | | 22,668 | 13,370 | 15,297 | 24,804 | 49,510 | | 22,647 |
| 81 - 85 | | | 46,742 | | | 31,682 | 17,762 | 13,779 | 12,502 | 17,489 | | 20,840 |
| 86 - 90 | | | | | | 45,137 | | 11,015 | 15,581 | 23,404 | 18,492 | 20,566 |
| 91 & Over | | | | | | | 38,177 | | | 2,740 | 3,247 | 11,853 |
| Average | 45,387 | 42,225 | 34,496 | 36,609 | 30,509 | 30,701 | 22,179 | 15,363 | 16,262 | 21,646 | 12,394 | 26,807 |

**DISABILITY RETIREES:**

| Attained Ages | Completed Years Since Retirement | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5- 9 | 10-14 | 15-19 | 20-24 | 25-29 | 30&Over | Total |
| 0 - 65 | | | | | | | | | | | | 0 |
| 66 - 70 | | | | | | | 1 | | | | | 1 |
| 71 & Over | | | | | | | | | | | | 0 |
| Totals | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |

**AVERAGE ANNUAL BENEFITS PAYABLE TO DISABILITY RETIREES:**

| Attained Ages | Completed Years Since Retirement | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5- 9 | 10-14 | 15-19 | 20-24 | 25-29 | 30&Over | Average Benefit |
| 0 - 65 | | | | | | | | | | | | 0 |
| 66 - 70 | | | | | | | 14,541 | | | | | 14,541 |
| 71 & Over | | | | | | | | | | | | 0 |
| Average | 0 | 0 | 0 | 0 | 0 | 0 | 14,541 | 0 | 0 | 0 | 0 | 14,541 |

***SURVIVING BENEFICIARIES OF FORMER MEMBERS:***

| Attained Ages | Completed Years Since Retirement | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5- 9 | 10-14 | 15-19 | 20-24 | 25-29 | 30&Over | Total |
| 0 - 55 | | | | | | | | | | | | 0 |
| 56 - 60 | | | | 1 | | | | 1 | | 2 | 1 | 5 |
| 61 - 65 | 1 | | | | | 2 | | 2 | 1 | 3 | | 9 |
| 66 - 70 | | | | | | 1 | | | | 2 | | 3 |
| 71 - 75 | | | | 1 | | 1 | 1 | | | 1 | 1 | 5 |
| 76 - 80 | | | | | | | | 1 | 3 | | | 4 |
| 81 - 85 | | | | | | 1 | | 2 | 2 | 2 | | 7 |
| 86 - 90 | | | 1 | | | | | | | 2 | 1 | 4 |
| 91 & Over | | | | | | | | | | | | 0 |
| Totals | 1 | 0 | 1 | 2 | 0 | 5 | 1 | 6 | 6 | 12 | 3 | 37 |

***AVERAGE ANNUAL BENEFITS PAYABLE TO SURVIVORS OF FORMER MEMBERS:***

| Attained Ages | Completed Years Since Retirement | | | | | | | | | | | Average Benefit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5- 9 | 10-14 | 15-19 | 20-24 | 25-29 | 30&Over | |
| 0 - 55 | | | | | | | | | | | | 0 |
| 56 - 60 | | | | 53,376 | | | | 5,440 | | 3,606 | 2,189 | 13,643 |
| 61 - 65 | 12,741 | | | | | 48,226 | | 10,990 | 10,751 | 4,206 | | 17,171 |
| 66 - 70 | | | | | | 9,028 | | | | 5,828 | | 6,894 |
| 71 - 75 | | | | 7,714 | | 6,315 | 13,023 | | | 3,090 | 2,189 | 6,466 |
| 76 - 80 | | | | | | | | 15,345 | 12,105 | | | 12,915 |
| 81 - 85 | | | | | | 38,303 | | 12,140 | 12,202 | 9,262 | | 15,073 |
| 86 - 90 | | | 13,354 | | | | | | | 15,864 | 10,745 | 13,957 |
| 91 & Over | | | | | | | | | | | | 0 |
| Average | 12,741 | 0 | 13,354 | 30,545 | 0 | 30,020 | 13,023 | 11,174 | 11,912 | 7,069 | 5,041 | 13,210 |

# EXHIBIT XI
## YEAR TO YEAR COMPARISON

| | Fiscal 2013 | Fiscal 2012 | Fiscal 2011 | Fiscal 2010 |
|---|---|---|---|---|
| Number of Active Members | 241 | 245 | 248 | 247 |
| Number of Retirees & Survivors | 146 | 143 | 147 | 140 |
| Number of Terminated Due Deferred Benefits | 5 | 6 | 6 | 6 |
| Number Terminated Due Refund | 35 | 29 | 29 | 20 |
| Active Lives Payroll | $ 13,086,633 | $ 13,386,956 | $ 13,027,410 | $ 12,333,966 |
| Retiree Benefits in Payment | $ 3,398,509 | $ 3,145,379 | $ 3,112,965 | $ 2,877,232 |
| Market Value of Assets | $ 69,206,200 | $ 61,490,163 | $ 63,415,774 | $ 53,081,300 |
| Entry Age Normal Accrued Liability | | | | |
| Active Lives | $ 64,907,264 | $ 63,629,904 | $ 57,858,056 | $ 51,499,975 |
| Retired Lives | 30,487,859 | 28,074,985 | 27,068,119 | 25,269,991 |
| Terminated Members | 841,790 | 1,148,984 | 997,914 | 904,695 |
| | ----------------- | ----------------- | ----------------- | ----------------- |
| Total EAN Accrued Liability | $ 96,236,913 | $ 92,853,873 | $ 85,924,089 | $ 77,674,661 |
| Ratio of AVA to Entry Age Normal Liability | 73.83% | 73.75% | 78.45% | 80.88% |
| Actuarial Value of Assets (AVA) | $ 71,052,280 | $ 68,481,599 | $ 67,405,502 | $ 62,823,395 |
| Present Value of Future Employer Normal Cost | $ 42,794,452 | $ 43,553,440 | $ 35,835,681 | $ 31,548,014 |
| Present Value of Future Employee Contributions | $ 6,278,416 | $ 6,721,009 | $ 6,237,947 | $ 6,064,371 |
| Present Value of Future Benefits | $120,125,148 | $118,756,048 | $109,479,130 | $100,435,780 |

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| | Fiscal 2014 | Fiscal 2013 | Fiscal 2012 | Fiscal 2011 |
|---|---|---|---|---|
| Employee Contribution Rate | 7.00% | 7.00% | 7.00% | 7.00% |
| Proj. Tax Contribution as % of Proj. Payroll | 19.30% | 15.71% | 15.71% | 16.41% |
| Actuarially Req'd Net Direct Employer Cont. | 22.58% | 23.73% | 19.34% | 15.35% |
| Actual Net Direct Employer Contribution Rate | 24.25% | 19.75% | 15.50% | 14.25% |

| Fiscal 2009 | Fiscal 2008 | Fiscal 2007 | Fiscal 2006 | Fiscal 2005 | Fiscal 2004 |
|---|---|---|---|---|---|
| 247 | 239 | 230 | 225 | 227 | 226 |
| 138 | 137 | 135 | 126 | 122 | 123 |
| 5 | 5 | 6 | 5 | 5 | 3 |
| 19 | 19 | 11 | 17 | 17 | 15 |
| $ 11,753,384 | $ 10,839,277 | $ 9,430,860 | $ 8,902,959 | $ 8,649,475 | $ 8,126,228 |
| $ 2,777,346 | $ 2,695,681 | $ 2,518,881 | $ 2,162,474 | $ 1,927,188 | $ 1,856,787 |
| $ 48,785,175 | $ 60,242,539 | $ 62,716,995 | $ 54,844,655 | $ 51,800,721 | $ 48,120,814 |
| $ 47,558,882 | $ 43,728,672 | $ 40,289,867 | $ 39,398,347 | $ 39,227,518 | $ 36,173,832 |
| 23,656,490 | 23,163,035 | 21,692,064 | 18,467,355 | 16,454,333 | 15,484,661 |
| 698,688 | 636,269 | 838,839 | 607,159 | 536,729 | 330,301 |
| $ 71,914,060 | $ 67,527,976 | $ 62,820,770 | $ 58,472,861 | $ 56,218,580 | $ 51,988,794 |
| 84.12% | 96.16% | 97.00% | 91.46% | 87.99% | 87.87% |
| $ 60,492,753 | $ 64,932,257 | $ 60,936,774 | $ 53,480,118 | $ 49,464,963 | $ 45,684,047 |
| $ 26,292,445 | $ 16,438,175 | $ 13,994,521 | $ 16,412,560 | $ 18,089,990 | $ 18,874,878 |
| $ 5,826,743 | $ 5,405,249 | $ 4,677,700 | $ 4,333,260 | $ 4,177,183 | $ 4,371,749 |
| $ 92,611,941 | $ 86,775,681 | $ 79,608,995 | $ 74,225,938 | $ 71,732,136 | $ 68,930,674 |

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| Fiscal 2010 | Fiscal 2009 | Fiscal 2008 | Fiscal 2007 | Fiscal 2006 | Fiscal 2005 |
|---|---|---|---|---|---|
| 7.00% | 7.00% | 7.00% | 7.00% | 7.00% | 7.00% |
| 16.84% | 15.73% | 16.24% | 16.50% | 15.39% | 16.18% |
| 10.57% | 3.29% | 2.40% | 6.66% | 11.32% | 10.81% |
| 3.50% | 2.00% | 6.25% | 11.25% | 11.00% | 8.25% |

# SUMMARY OF PRINCIPAL PLAN PROVISIONS

The Registrars of Voters Employees' Retirement System was established as of the first day of January nineteen hundred and fifty-five for the purpose of providing retirement allowances and other benefits. The following summary of plan provisions is for general informational purposes only and does not constitute a guarantee of benefits.

MEMBERSHIP - All Registrars of Voters, their deputies, and their permanent employees in each parish of the State of Louisiana. Also, any employee of the retirement system or the Louisiana Registrars of Voters' Association. Elected or appointed officials who have retired from service under any publicly funded retirement system within the state and who are currently receiving benefits are not eligible to become members of the system.

CONTRIBUTION RATES - The fund is financed by employee contributions of at least 7% but not more than 9% of earnable compensation as determined by the board of trustees. In addition, the fund receives revenue sharing funds as appropriated each year by the legislature. Also, each sheriff and ex-officio tax collector remits the employers' share of the actuarially required contribution to fund the system's defined benefit and defined contribution plans up to a maximum of one-sixteenth of one percent of the aggregate amount of the tax shown to be collected by the tax roll of each respective parish. Should employee contributions and tax funds collected from ad valorem taxes and revenue sharing funds be insufficient to provide for the gross employer actuarially required contribution, the employer is required to make direct contributions as determined by the Public Retirement Systems' Actuarial Committee. The board of trustees is authorized to require a net direct contribution rate of up to three percent more than the rate determined under R.S. 11:103. In any fiscal year during which the net direct employer contribution rates would otherwise be decreased, the board of trustees is authorized to set the employer contribution rate at any point between the previous year's employer contribution rate and the decreased rate that would otherwise occur. Any excess funds resulting from the additional contributions will be credited to the Funding Deposit Account defined in R.S. 11:107.1.

CONTRIBUTION REFUNDS - Upon withdrawal from service, members not entitled to a retirement allowance are paid a refund of accumulated contributions upon request. Receipt of such a refund cancels all accrued rights in the system.

FINAL AVERAGE COMPENSATION – For a member whose first employment making him eligible for membership in the system began on or before June 30, 2006, final average compensation is based on the average monthly earnings during the highest sixty consecutive months or joined months if service was interrupted, subject to certain transition rules. For those who retire on or before December 31, 2012, a thirty six month final average compensation period shall be used. For those retiring between January 1, 2013 and December 31, 2014 the number of months to be used in determining the final average compensation will be thirty-six plus the number of completed months since January 1, 2013. In no case shall the monthly final average compensation be less than the average monthly earnings during the member's highest thirty-six consecutive or joined months of service earned for employment before January 1, 2013. The earnings to be considered for each twelve month period within the sixty month period shall not exceed 125% of the preceding twelve month period.

For a member whose first employment making him eligible for membership in the system began after June 30, 2006, final average compensation is based on the average monthly earnings during the highest sixty consecutive months or joined months if service was interrupted.

RETIREMENT BENEFITS –
Members whose first employment making them eligible for membership occurred prior to January 1, 2013 with ten years of creditable service may retire at age sixty; such members with twenty years of service may retire at age fifty-five; such members with thirty years of service may retire regardless of age. The annual retirement allowance for such members is equal to three and one-third percent of the member's average final compensation for each year of creditable service. Creditable service at retirement includes membership service, service as certified on prior service certificates, and any unused sick leave and any unused annual leave in excess of 300 hours at the date of retirement.

Members whose first employment making them eligible for membership occurred on or after January 1, 2013 with ten years of creditable service may retire at age sixty-two; such members with twenty years of service may retire at age sixty; such members with thirty years of service may retire at age fifty-five. The annual retirement allowance for such members is equal to three percent of the member's average final compensation for each year of creditable service. The annual amount of the retirement allowance for any member, who has at least thirty years of total creditable service, with at least twenty years of creditable service in this system, is three and one-third percent of the average final compensation for each year of creditable service. Creditable service at retirement includes membership service, service as certified on prior service certificates, and any unused sick leave and any unused annual leave in excess of 300 hours at the date of retirement.

OPTIONAL ALLOWANCES - Members may receive their benefits as a life annuity, or in lieu of such receive a reduced benefit according to the option selected that is the actuarial equivalent of the maximum benefit.

**Option 1** - If the member dies before he has received in annuity payments the present value of his member's annuity as it was at the time of retirement the balance is paid to his beneficiary.

**Option 2** - Upon retirement, the member receives a reduced benefit. Upon the member's death, the designated beneficiary will continue to receive the same reduced benefit.

**Option 3** - Upon retirement, the member receives a reduced benefit. Upon the member's death, the designated beneficiary will receive one-half of the member's reduced benefit.

**Option 4** - Upon retirement, the member elects to receive a board-approved benefit which is actuarially equivalent to the maximum benefit.

A member may also elect to receive an actuarially reduced benefit which provides for an automatic 2 ½% annual compound increase in monthly retirement benefits based on the reduced benefit and commencing on the later of age fifty-five or retirement anniversary; this COLA is in addition to any ad hoc COLAs which are payable.

DISABILITY BENEFITS - Ten years of creditable service are required in order to be eligible for disability benefits. Disabled members receive a normal retirement allowance if eligible. Otherwise, the member whose first employment making them eligible for membership occurred prior to January 1, 2013 receives the lesser of three and one-third percent of average final compensation multiplied by the number of years of creditable service (not to be less than fifteen years), or three and one-third percent of average final compensation multiplied by years of service assuming continued service to age sixty. Any member whose first employment making them eligible for membership occurred after January 1, 2013 receives the lesser of three percent of average final compensation multiplied by the number of years of creditable service (not to be less than fifteen years), or three percent of average final compensation multiplied by years of service assuming continued service to age sixty-two. Disability benefits may not exceed two-thirds of earnable compensation.

SURVIVOR BENEFITS - If a member has less than five years of service credit, the surviving spouse or minor children receive a refund of the member's contributions. If the member has at least five years of service credit and is not eligible to retire, the spouse receives an automatic option 2 benefit based on the accrued benefits at the time of death with option 2 factors based on the age that the member and spouse would have been had the member survived, continued in service, and then retired on earliest normal retirement date. If the member is eligible to retire at the date of death, the surviving spouse receives automatic option 2 benefits. If there are surviving minor or handicapped children with no surviving spouse and the member has five or more years of service credit the children receive eighty percent of the accrued retirement benefit in equal portions until the age of majority or for the duration of the handicap for a handicapped child. The retirement system pays a lump sum refund equal to the difference between total monthly survivor benefits paid and total accrued contributions, if any, upon the cessation of all eligible monthly payments.

DEFERRED RETIREMENT OPTION PLAN - In lieu of terminating employment and accepting a service retirement allowance, any member who is eligible for normal retirement may elect to participate in the Deferred Retirement Option Plan (DROP) for up to three years and defer the receipt of benefits. Upon commencement of participation in the plan, membership in the system terminates. During participation in the plan, monthly retirement benefits that would have been payable, had the person elected to cease employment and receive a service retirement allowance, are paid into the DROP fund. This fund does not earn interest. In addition, no cost of living increases are payable to participants until employment which made them eligible to become members of the system has been terminated for at least one full year.

Upon termination of employment prior to or at the end of the specified period of participation, a participant in the plan may receive, at his option, a lump sum from the account equal to the payments into the account, a true annuity based upon his account balance in that fund, or any other method of payment if approved by the board of trustees. The monthly benefits that were being paid into the DROP fund will begin to be paid to the retiree. If a participant dies during the participation in the plan, a lump sum equal to his account balance in the plan fund shall be paid to his named beneficiary or, if none, to his estate. If employment is not terminated at the end of the three years, payments into the plan fund cease and the person resumes active contributing membership in the system.

COST OF LIVING INCREASES - The board of trustees is authorized to grant retired members and widows of members who have retired at least two years, an annual cost of living increase of up to 3% of their original benefit, and to retired members and widows who are sixty-five years of age and older a 2% increase in their original benefit (or the benefit being received on October 1, 1977 if they retired prior to that time). In order for the board to grant either of these increases the system must meet certain criteria detailed in the statute related to funding status and interest earnings. In lieu of other cost of living increases the board may grant an increase to retirees in the form "X×(A&B)" where "A" is equal to the number of years of credited service accrued as retirement or death of the member or retiree and "B" is equal to the number of years since death of the member or retiree to June 30 of the initial year of increase and "X" is equal to any amount available for funding such increase up to a maximum of $1.00.

DEFINED CONTRIBUTION PLAN - Funds contributed to the system in excess of those required contributions to the Pension Accumulation Fund, as established by the Public Retirement Systems Actuarial Committee, are deposited in the Members' Supplemental Savings Fund. The amount of funds deposited with the members' supplemental savings fund is three percent of the salaries paid to active contributing members during the prior fiscal year unless the Public Retirement Systems' Actuarial Committee recommends a lessor percentage based on available funds and the requirements of the Defined Benefit Plan. A member is entitled to payment of all contributions and interest credited to his account upon termination of employment. Payment to the member is made at the end of the calendar quarter following the quarter in which the member terminates. Interest and other earnings or losses are allocated at least once each year on the valuation date of the fund. Earnings or losses are allocated to members in proportion to their account balances as of the first day of the period for which earnings are credited.

The funds in the Member's Supplemental Savings Fund are invested separately from other funds held by the system and the funds constitute a separate trust. Payments, accruals, and allocations due to be made at the end of the fiscal year may be delayed until such time as the necessary financial information is available to the system's administrator, but in no event later than 6 months after the close of the fiscal year.

## ACTUARIAL ASSUMPTIONS

In determining actuarial costs, certain assumptions must be made regarding future experience under the plan. These assumptions include the rate of investment return, mortality of plan members, rates of salary increase, rates of retirement, rates of termination, rates of disability, and various other factors which have an impact on the cost of the plan. To the extent that future experience varies from the assumptions selected for valuation, future costs will be either higher or lower than anticipated. The following chart illustrates the effect of emerging experience on the plan.

| Factor | Increase in Factor Results in |
| --- | --- |
| Investment Earnings Rate | Decrease in Cost |
| Annual Rate of Salary Increase | Increase in Cost |
| Rates of Retirement | Increase in Cost |
| Rates of Termination | Decrease in Cost |
| Rates of Disability | Increase in Cost |
| Rates of Mortality | Decrease in Cost |

| | |
| --- | --- |
| ACTUARIAL COST METHOD: | The Aggregate Actuarial Cost Method with allocation based on earnings. |
| VALUATION INTEREST RATE: | 7 ½% (Net of Investment Expense) |
| ACTUARIAL ASSET VALUES: | Assets are valued at market value adjusted to defer four-fifths of all earnings above or below the valuation interest rate in the valuation year, three-fifths of all earnings above or below the valuation interest rate in the prior year, two-fifths of all earnings above or below the valuation interest rate from two years prior, and one-fifth of all earnings above or below the valuation interest rate from three years prior. The resulting smoothed values are subject to a corridor of 85% to 115% of the market value of assets. If the smoothed value falls outside the corridor, the actuarial value is set equal to the average of the corridor limit and the smoothed value. |
| ANNUAL SALARY INCREASE RATE: | 6 ¾% (3.00% inflation / 3.75% merit) |
| ACTIVE MEMBER, ANNUITANT, AND BENEFICIARY MORTALITY: | RP 2000 Combined Healthy Table set back 3 years for males and 2 years for females |
| RETIREE COST OF LIVING INCREASE: | The present value of future retirement benefits is based on benefits currently being paid by the system and includes previously granted cost of living increases. The present values do not include provisions for potential future |

increases not yet authorized by the Board of Trustees.

RATES OF RETIREMENT: The table of these rates is included later in the report. These rates apply only to those individuals eligible to retire. The rate of retirement for persons who have completed DROP participation and have remained employed is 0.17.

RETIREMENT LIMITATIONS: Projected retirement benefits are not subjected to IRS Section 415 limits.

RATES OF WITHDRAWAL: The rates of withdrawal are applied based upon completed years of service according to the following table:

| Service | Factor | Service | Factor |
|---|---|---|---|
| <1 | 0.160 | 10 | 0.013 |
| 1 | 0.070 | 11 | 0.013 |
| 2 | 0.070 | 12 | 0.013 |
| 3 | 0.070 | 13 | 0.013 |
| 4 | 0.070 | 14 | 0.013 |
| 5 | 0.070 | 15 | 0.013 |
| 6 | 0.060 | 16 | 0.013 |
| 7 | 0.050 | 17 | 0.013 |
| 8 | 0.040 | 18 | 0.013 |
| 9 | 0.030 | >18 | 0.013 |

Note: Withdrawal rates for members eligible to retire are assumed to be zero.

RATES OF DROP ENTRY: A table of these rates is included later in the report. These rates apply only to those individuals eligible to enter DROP.

DROP PARTICIPATION: All persons who enter DROP are assumed to participate for the full three-year period and retire after completing 1 year of Post-DROP service.

MARRIAGE STATISTICS: 80% of the members are assumed to be married; husbands are assumed to be three years older than their wives.

FAMILY STATISTICS: Assumptions utilized in determining the costs of various survivor benefits as listed below, are derived from the information provided in the 2000 U. S. Census:

| Member's Age | % With Children | Number of Children | Average Age |
|---|---|---|---|
| 25 | 62% | 1.7 | 6 |
| 35 | 82% | 2.1 | 10 |
| 45 | 66% | 1.8 | 13 |
| 55 | 19% | 1.4 | 15 |
| 65 | 2% | 1.4 | 15 |

RATES OF DISABILITY: 20% of the disability rates used for the 21st valuation of the Railroad Retirement System for individuals with 10-19 years of service. The table of these rates is included later in the report.

DISABLED LIVES MORTALITY: RP-2000 Disabled Lives Mortality Tables for Males and Females

VESTING ELECTING PERCENTAGE: 70% of those vested elect deferred benefits in lieu of contribution refunds**.**

SICK AND ANNUAL LEAVE: Members are assumed to accrue one year of unused sick and annual leave to be credited for retirement benefit accrual purposes for each 16.67 years of Pre-DROP creditable service. Members are assumed to convert 0.22 years of sick and annual leave for every year of DROP Participation service and Post-DROP service in their Post-DROP benefit.

# ACTUARIAL TABLES AND RATES

| Age | Male Mortality Rates | Female Mortality Rates | Retirement Rates | DROP Entry Rates | Disability Rates |
|---|---|---|---|---|---|
| 18 | 0.00027 | 0.00018 | 0.00000 | 0.00000 | 0.00030 |
| 19 | 0.00028 | 0.00018 | 0.00000 | 0.00000 | 0.00030 |
| 20 | 0.00030 | 0.00019 | 0.00000 | 0.00000 | 0.00030 |
| 21 | 0.00032 | 0.00019 | 0.00000 | 0.00000 | 0.00030 |
| 22 | 0.00033 | 0.00019 | 0.00000 | 0.00000 | 0.00030 |
| 23 | 0.00035 | 0.00019 | 0.00000 | 0.00000 | 0.00030 |
| 24 | 0.00036 | 0.00019 | 0.00000 | 0.00000 | 0.00030 |
| 25 | 0.00037 | 0.00020 | 0.00000 | 0.00000 | 0.00030 |
| 26 | 0.00037 | 0.00020 | 0.00000 | 0.00000 | 0.00030 |
| 27 | 0.00038 | 0.00021 | 0.00000 | 0.00000 | 0.00030 |
| 28 | 0.00038 | 0.00021 | 0.00000 | 0.00000 | 0.00030 |
| 29 | 0.00038 | 0.00022 | 0.00000 | 0.00000 | 0.00030 |
| 30 | 0.00038 | 0.00024 | 0.00000 | 0.00000 | 0.00030 |
| 31 | 0.00039 | 0.00025 | 0.00000 | 0.00000 | 0.00030 |
| 32 | 0.00041 | 0.00026 | 0.00000 | 0.00000 | 0.00030 |
| 33 | 0.00044 | 0.00031 | 0.00000 | 0.00000 | 0.00030 |
| 34 | 0.00050 | 0.00035 | 0.00000 | 0.00000 | 0.00030 |
| 35 | 0.00056 | 0.00039 | 0.00000 | 0.00000 | 0.00034 |
| 36 | 0.00063 | 0.00044 | 0.00000 | 0.00000 | 0.00038 |
| 37 | 0.00070 | 0.00047 | 0.00000 | 0.00000 | 0.00042 |
| 38 | 0.00077 | 0.00051 | 0.00000 | 0.00000 | 0.00048 |
| 39 | 0.00084 | 0.00055 | 0.00000 | 0.00000 | 0.00054 |
| 40 | 0.00090 | 0.00060 | 0.00000 | 0.00000 | 0.00062 |
| 41 | 0.00096 | 0.00065 | 0.00000 | 0.00000 | 0.00070 |
| 42 | 0.00102 | 0.00071 | 0.00000 | 0.00000 | 0.00078 |
| 43 | 0.00108 | 0.00077 | 0.00000 | 0.00000 | 0.00088 |
| 44 | 0.00114 | 0.00085 | 0.00000 | 0.00000 | 0.00100 |
| 45 | 0.00122 | 0.00094 | 0.00000 | 0.00000 | 0.00114 |
| 46 | 0.00130 | 0.00103 | 0.12000 | 0.43000 | 0.00130 |
| 47 | 0.00140 | 0.00112 | 0.12000 | 0.43000 | 0.00146 |
| 48 | 0.00151 | 0.00122 | 0.12000 | 0.43000 | 0.00166 |
| 49 | 0.00162 | 0.00133 | 0.12000 | 0.43000 | 0.00188 |
| 50 | 0.00173 | 0.00143 | 0.12000 | 0.43000 | 0.00214 |
| 51 | 0.00186 | 0.00155 | 0.12000 | 0.43000 | 0.00244 |
| 52 | 0.00200 | 0.00168 | 0.12000 | 0.43000 | 0.00276 |
| 53 | 0.00214 | 0.00185 | 0.12000 | 0.43000 | 0.00314 |
| 54 | 0.00245 | 0.00202 | 0.12000 | 0.43000 | 0.00356 |
| 55 | 0.00267 | 0.00221 | 0.06000 | 0.22000 | 0.00404 |
| 56 | 0.00292 | 0.00242 | 0.06000 | 0.22000 | 0.00460 |
| 57 | 0.00320 | 0.00272 | 0.06000 | 0.22000 | 0.00522 |
| 58 | 0.00362 | 0.00309 | 0.06000 | 0.22000 | 0.00592 |
| 59 | 0.00420 | 0.00348 | 0.06000 | 0.22000 | 0.00674 |
| 60 | 0.00469 | 0.00392 | 0.06000 | 0.22000 | 0.00976 |
| 61 | 0.00527 | 0.00444 | 0.06000 | 0.22000 | 0.00976 |
| 62 | 0.00595 | 0.00506 | 0.06000 | 0.22000 | 0.00976 |
| 63 | 0.00675 | 0.00581 | 0.06000 | 0.22000 | 0.00976 |
| 64 | 0.00768 | 0.00666 | 0.06000 | 0.22000 | 0.00976 |
| 65 | 0.00876 | 0.00765 | 0.06000 | 0.22000 | 0.00976 |

# GLOSSARY

**Accrued Benefit** – The pension benefit that an individual has earned as of a specific date based on the provisions of the plan and the individual's age, service, and salary as of that date.

**Actuarial Accrued Liability** – The actuarial present value of benefits payable to members of the fund less the present value of future normal costs attributable to the members.

**Actuarial Assumptions** - Assumptions as to the occurrence of future events affecting pension costs. These assumptions include rates of mortality, withdrawal, disablement, and retirement. Also included are rates of investment earnings, changes in compensation, as well as statistics related to marriage and family composition.

**Actuarial Cost Method** – A procedure for determining the portion of the cost of a pension plan to be allocated to each year. Each cost method allocates a certain portion of the actuarial present value of benefits between the actuarial accrued liability and future normal costs. Once this allocation is made, a determination of the normal cost attributable to a specific year can be made along with the payment to amortize any unfunded actuarial accrued liability. To the extent that a particular funding method allocates a greater (lesser) portion of the actual present value of benefits to the actuarial accrued liability it will allocate less (more) to future normal costs.

**Actuarial Equivalence** – Payments or receipts with equal actuarial value on a given date when valued using the same set of actuarial assumptions.

**Actuarial Gain (Loss)** – The financial effect on the fund of the difference between the expected and actual experience of the fund. The experience may be related to investment earnings above (or below) those expected or changes in the liability structure due to fewer (or greater) than the expected numbers of retirements, deaths, disabilities, or withdrawals. In addition, other factors such as pay increases above (or below) those forecast can result in actuarial gains or losses. The effect of such gains (or losses) is to decrease (or increase) future costs.

**Actuarial Present Value** - The value, as of a specified date, of an amount or series of amounts payable or receivable thereafter, with each amount adjusted to reflect the time value of money (through accrual of interest) and the probability of payments. For example: if $600 invested today will be worth $1,000 in 10 years and there is a 50% probability that a person will live 10 years, then the actuarial present value of $1,000 payable to that person if he should survive 10 years is $300.

**Actuarial Value of Assets** - The value of cash, investments, and other property belonging to the pension plan as used by the actuary for the purpose of the actuarial valuation. This may correspond to the book value, market value, or some modification involving either or both book and market value. Adjustments to market values are often made to reduce the volatility of asset values.

**Asset Gain (Loss)** - That portion of the actuarial gain attributable to investment performance above (below) the expected rate of return in the actuarial assumptions.

**Amortization Payment** - That portion of the pension plan contribution designated to pay interest and reduce the outstanding principal balance of unfunded actuarial accrued liability. If the amortization payment is less than the accrued interest on the unfunded actuarial accrued liability the outstanding principal balance will increase.

**Contribution Shortfall (Excess)** - The difference between contributions recommended in the prior valuation and the actual amount received.

**Decrements** – Events which result in the termination of membership in the system such as retirement, disability, withdrawal, or death.

**Employer Normal Cost** - That portion of the normal cost not attributable to employee contributions. It includes both direct contributions made by the employer and contributions from other non-employee sources such as revenue sharing and revenues related to taxes.

**Funded Ratio** – A measure of the ratio of assets to liabilities of the system according to a specific definition of those two values. Typically the assets used in the measure are the actuarial value of assets; the liabilities are defined by reference to some recognized actuarial funding method. Thus the funded ratio of a plan depends not only on the financial strength of the plan but also on the funding method used to determine the liabilities and the asset valuation method used to determine the assets in the ratio.

**Normal Cost** - That portion of the actuarial present value of pension plan benefits and expenses allocated to a valuation year by the actuarial cost method. This is analogous to one year's insurance premium.

**Pension Benefit Obligation** - The actuarial present value of benefits earned or credited to date based on the members expected final average compensation at retirement. For current retirees or terminated members this is equivalent to the actuarial present value of their accrued benefit.

**Projected Benefits** – The benefits expected to be paid in the future based on the provisions of the plan and the actuarial assumptions. The projected values are based on anticipated future advancement in age and accrual of service as well as increases in salary paid to the participant.

**Unfunded Actuarial Accrued Liability** - The excess of the actuarial accrued liability over the actuarial value of assets.

**Vested Benefits -** Benefits that the members are entitled to even if they withdraw from service.

**NOTES:**